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THE CALIFORNIA COMMERCIAL
PASSENGER FISHING VESSEL AND
SOUTHERN CALIFORNIA LIVE BAIT INDUSTRIES

SUBMITTED BY:

GRUEN GRUEN + ASSOCIATES

ECONOMISTS AND SOCIOLOGISTS

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SEPTEMBER 1979

ADMINISTRATIVE REPORT
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PREFACE

This study was prepared by Gruen Gruen + Associates under contract number 03-78-MØ2-0005. The contract objective was to collect and analyze data reflecting economic characteristics of the commercial passenger fishing and live-bait fishing fleets. The resulting economic profiles serve as baseline information for future economic impact assessments and are intended to help clarify some economic issues in marine fisheries management. Since the report has been prepared under contract, the statements, findings, conclusions and recommendations herein are those of the contractor and do not necessarily reflect the view of the National Marine Fisheries Service.

Daniel D. Huppert
Industry Economist
September 14, 1979

ABSTRACT

This study was conducted by the Bureau of Economic Research under contract number 10-15-1001. The purpose of the study was to collect and analyze data reflecting economic conditions of the American passenger flying and to determine the effect of the Federal Reserve Board's policy on the economy for the year 1917. The study was conducted by the Bureau of Economic Research and was intended to help clarify some economic factors in the American economy. Since the results have been prepared under contract, the results, findings, conclusions and recommendations are the property of the Government and are not necessarily subject to the view of the National Bureau of Economic Research.

Prepared by the
Bureau of Economic Research
September 14, 1917

THE CALIFORNIA COMMERCIAL
PASSENGER FISHING VESSEL AND
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A REPORT TO:
NATIONAL MARINE FISHERIES SERVICE

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SEPTEMBER 1979

C295

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PURPOSES AND APPROACH

GOALS

The study summarized in this report was commissioned by the National Marine Fisheries Service to describe the economics of the California commercial passenger fishing vessel industry. The vessels in this industry charge passengers for fishing and nonfishing trips. Therefore, we believe that the term "commercial passenger fishing vessel industry" is more appropriate than the term "fishing partyboats" that has traditionally been used by public agencies, including the California Department of Fish and Game, when reporting on the activities of this industry. In this report both terms will be used interchangeably.

The California Department of Fish and Game has estimated that only 23% of total sport fishing effort is conducted aboard partyboats, but partyboats account for 55% of the estimated sport catch (Pinkas, 1968:21). Over 700,000 passengers are carried each year by the California partyboat fleet, but the number is declining steadily. The size of the fleet is also in decline, but the rate of new vessel launchings is greater than ever. Systems of this complexity require substantial explanation; it is our position that there is no substitute for an accurate description of the operant conditions. That is the purpose of this report.

METHODOLOGY

The questionnaire used in the mailed survey for this study was based upon a series of interviews with members of the

commercial passenger fishing vessel industry and a review of existing data. A pretest was conducted in late November 1977, and once the survey instrument was finalized, it was sent to the Office of Management and Budget (OMB) for approval.

The sample for the mailing of the questionnaire was drawn from actual Fishing Partyboat licenses issued by the California State Department of Fish and Game for the 1977-78 year. Gruen Gruen + Associates (GG+A) received copies of those licenses on November 28, 1977 totaling to 354 registered vessels. When the initial mailing of the questionnaire took place in October 1978, 368 questionnaires were mailed out to 326 vessel operators. The discrepancy between the number of licenses and the number of mailings can be explained by a number of factors. Questionnaires were mailed to each vessel owner/operator as listed on each of the vessel registrations. Those vessel owner/operators who had more than one vessel registered in their name received one questionnaire per vessel. After the first batch of questionnaires went out in the mail, several respondents indicated that they had more vessels than they had received questionnaires for and either requested additional forms or doubled up on the one(s) they had. These additional vessels could either be vessels which were registered in 1977, after we received the 1977 licenses, or they could be vessels which have just changed hands within the fleet. Therefore there is probably some duplication within our estimate of the total number of registered vessels (368) which must be considered when the sample is enlarged to represent the universe.

One other figure is used in this report to represent the number of vessels in the active passenger vessel fleet. This is the 328 vessels whose owner/operators reported catches to the State

Department of Fish and Game in 1977. (The distribution of these vessels by location can be found in Table 18.) This number is smaller than the estimate of 368 registered vessels because not all registered vessels report catches in any one year. As is shown in Appendix A describing the survey, in addition to the 94 respondents, 9 vessel owners reported being out of the business at the time of our survey.

After the questionnaires had been out for a month and a half, only 69 completed questionnaires had been received. Furthermore, 28 of the original 368 questionnaires were returned undeliverable. The 19% return rate achieved was unacceptable; so in early January 1979 a follow-up mailing took place. A postcard asking for cooperation, an additional copy of the questionnaire and a copy of the original cover letter were included in this mailing. By January 22, a total of 94 completed questionnaires had been received and analysis was begun.

Our final sample of respondents was 26% of the original 368 registered vessels. Table 1 below shows the distribution of the 94 respondents by location of mooring as compared to the distribution of the original sample. In general, the respondents represent the sample of registered vessels fairly well. The San Diego, Long Beach and Bodega Bay areas were all slightly overrepresented and the Monterey and San Francisco areas were underrepresented.

The range of vessel capacities were not quite as well represented by the respondents. Table 2 shows that the middle group - 26 to 47 passengers - was overrepresented by 11.4%, while the two categories of smaller boats were underrepresented by 6.5% and 3%.

TABLE 1

Comparison of Survey Respondents to
Universe of Registered Vessels by Area

<u>Area</u>	<u>Sample of Registered Vessels</u>		<u>Respondents</u>		<u>% Difference</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	
Imperial Beach, San Diego, Mission Bay	75	20.4	24	25.5	+ 5.5
Dana Harbor, Oceanside	13	3.5	2	2.1	- 1.4
Huntington Beach, Balboa	6	1.6	--	--	--
San Pedro, Long Beach	44	12.0	18	19.1	+ 7.1
Malibu, Redondo Beach, Santa Monica	13	3.5	3	3.2	- 0.3
Santa Barbara, Port Hueneme	31	8.4	9	9.6	+ 1.2
Avila, Morro Bay	16	4.4	--	--	--
Santa Cruz, Moss Landing, Monterey	40	10.9	5	5.3	- 5.6
Bodega Bay	10	2.7	9	9.6	+ 6.9
San Francisco Bay and Delta	100	27.2	19	20.2	- 7.0
Crescent City, Ft. Bragg, Eureka	17	4.6	4	4.3	- 0.3
Other	3	0.8	1	1.1	+ 0.3
Total	368	100.0	94	100.0	

Sources: California State Department of Fish and Game Partyboat Licences, 1977
and Gruen Gruen + Associates Passenger Fishing Vessel Survey

TABLE 2

Comparison of Survey Respondents
to Universe of Registered Vessels
by Vessel Capacity

Capacity of Vessel (Passengers)	Sample of Registered Vessels		Respondents		% Difference
	#	%	#	%	
1 - 6	70	19.0	15	16.0	- 3.0
7 - 25	110	29.9	22	23.4	- 6.5
26 - 47	83	22.6	32	34.0	+ 11.4
48 - 68	65	17.7	18	19.1	+ 1.4
69 +	33	9.0	7	7.5	- 1.5
Unknown	7	1.9	--	--	--
Total	368	100.1*	94	100.0	

*Total does not equal 100% due to rounding.

Sources: California State Department of Fish and Game Fishing Partyboat Licenses, 1977 and Gruen Gruen + Associates Passenger Fishing Vessel Survey 1978-79.

During the literature review and pretest stage of the questionnaire design, it was discovered that it is impractical to obtain accurate operating and capital cost data by written response. We, therefore, asked in the questionnaire for an indication of willingness to participate further in the study, so that we could interview in person a sample of operators who were willing to disclose financial information. Of the 94 respondents, 73% said they would be willing to participate, so a subsample was drawn for this second step of data gathering.

The subsample for the in-person interviews was drawn on the basis of location, vessel size and trip type. Vessels that were similar in terms of these characteristics were most likely to exhibit relatively homogeneous cost characteristics.

A more complete description of the survey methodology can be found in Appendix A. Copies of the introductory cover letter, mailed questionnaire, follow-up postcard and the interview guides used in the in-person interviews are contained in Appendix B. We used our in-house copy of the statistical package for the social sciences (SPSS) to statistically analyze the survey responses to the mailed questionnaire.

II

HISTORY

Parke Young (1969) traced the origins of the California party-boat industry to the last decade of the 19th century. At that time large game fish such as marlin, swordfish, black sea bass and the tunas lured sportsmen to Catalina Island. At Avalon several 18- to 20-foot boats were for hire, with room for two fishermen and the skipper/guide. Originally, vessels were open and powered by sail; small gasoline engines were adapted to this use around 1905. It is reported that by 1912 engines with up to 40 horsepower were present in this fleet of 50 to 100 incipient "partyboats".

Further north, Monterey sportsmen had been trolling for salmon as early as 1893, several years prior to the advent of the commercial fishery. Until about 1900 most fishing in the state was conducted from open skiffs powered by sail and oar. By the turn of the century, 22- to 32-foot long double-enders, many with clipper bows, were being constructed in Monterey and San Francisco, largely by immigrant Italian fishermen.

The original "Monterey's," known at the time as "Frisco feluccas," were open vessels propelled by red sails rigged in the ancient Mediterranean lateen style. These vessels evolved technologically in conjunction with the development of the commercial salmon trolling fishery, yet the style persisted as the predominate vessel type for both ocean sport and commercial fishing until the mid-1930's.

By 1939 over 200 vessels in California were available for "sport fishing parties." Regular, daily schedules were in effect, as well as the opportunity for special charters. Vessels

operating out of southern California ports could accommodate an average of 30 anglers, while the capacity of craft from northern ports averaged less than 14 passengers for day fishing trips.

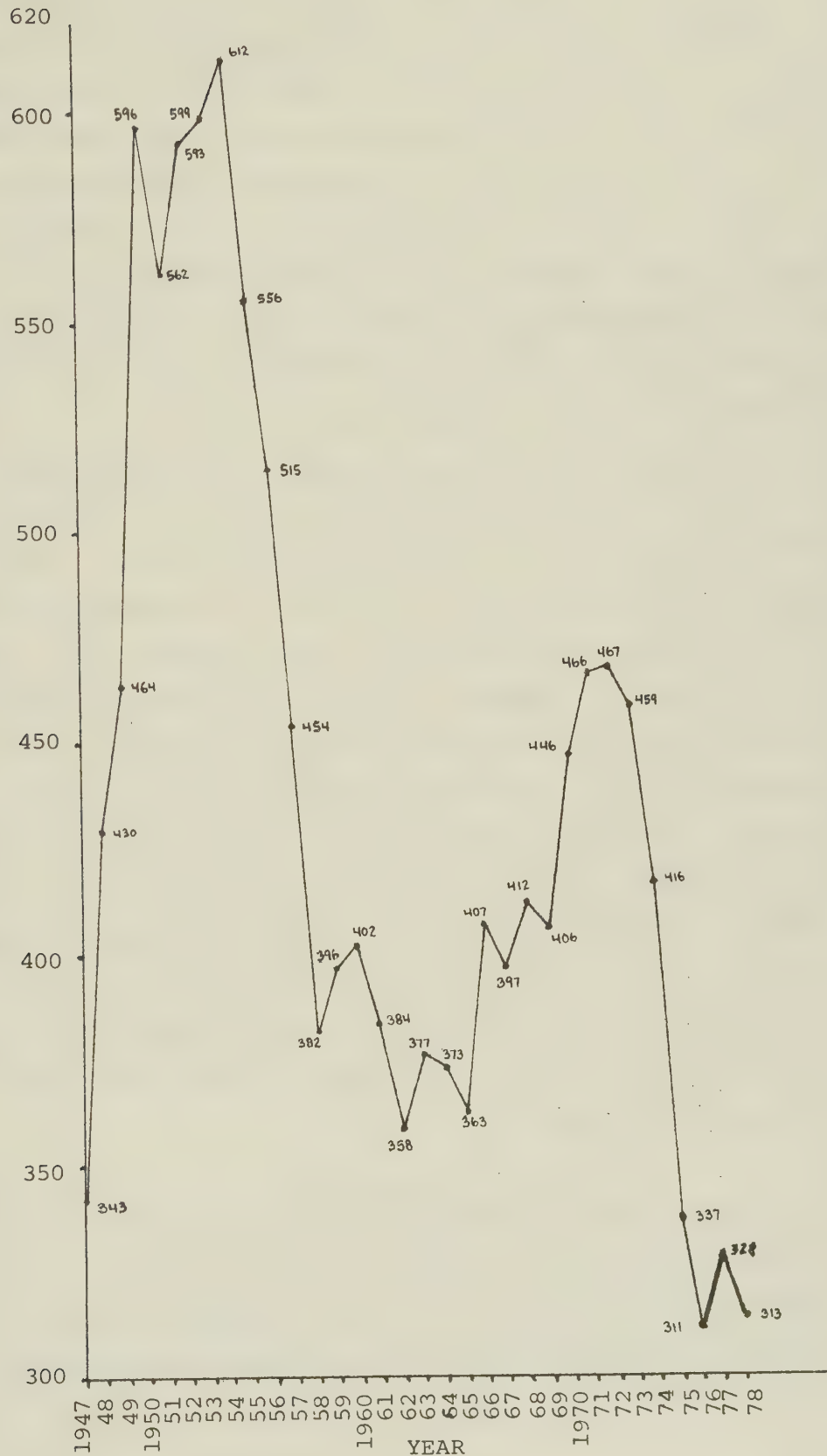
World War II had several discrete impacts on west coast fishing activity, both sport and commercial. During the war, partyboats were closely regulated and restricted to certain ports; it is estimated that in California waters fewer than ten boats were active in the passenger sport fishing trade during this period.

California Department of Fish and Game records indicate that immediately following World War II the partyboat fleet, along with other segments of the economy, experienced dramatic expansion. The number of vessels in the state grew from 343 in 1947 to a record high of 612 in 1954, an increase of 44%. Subsequent years have witnessed a decline in the total number of partyboats in California. After nearly 25 years the number of vessels in operation is once again at the 1947 level. The number of partyboats reporting to the Department of Fish and Game each year is presented graphically in Figure 1.

The precipitous decline in the number of vessels beginning with the 1955 season can be attributed to several factors. Aside from intense competition between operators and landings and a concomitant decline in the average number of fish caught per angler, at least two significant external conditions contributing to this attrition of vessels can be identified: public Law 519, and a change in the accessibility of individually-owned recreational boats.

FIGURE 1

Total Number of Vessels



Source: California Department of Fish and Game Annual Reports of Partyboat Landings

Public Law 519 established new and stringent regulations governing the operation of small passenger vessels. The law was enacted in 1956 and enforcement was delayed until 1958 but most partyboat operators were aware that new regulations were inevitable as early as 1954. At that time, many of the vessels in operation were old and having been converted from other uses, they would not be acceptable for the passenger trade under the new standards (e.g., lacking water-tight bulkheads between compartments). Many vessels withdrew from the fleet between 1954 and 1958 in anticipation of and response to this legislation.

These events coincided with an increased possibility for individual anglers to own their own boats. As a result of technology and materials developed during the war, the mass production of fiberglass, plywood and aluminum boats brought the possibility of being one's own skipper within the reach of many sport fishermen. Landing operators watched sadly as fleets of small, privately-owned boats, each with one or two previously loyal customers, would file out of the harbor in the wake of a half-full partyboat. It was particularly distressing for partyboat operators when the private boats would follow them to the fishing grounds, taking advantage of the larger vessels' navigation, the skippers' knowledge of the grounds and capacity to attract fish by chumming with live bait. It is generally accepted that the major competitor to the commercial passenger fishing industry is the individually-owned recreational boat.

For nearly twenty years following the significant decline of the mid-1950's in the number of partyboats in California, the industry experienced both a gradual increase in the size of the fleet and in the volume of passengers carried each year. Fleet size peaked again in 1972 with 467 vessels reporting;

the maximum passenger volume was reached the following year. Both fleet size and total number of anglers annually have been in steady decline since that time. California Department of Fish and Game statistics reveal a 20% decrease in the number of passengers from 1973 to 1978 (880,100 to 702,545); the 1978 angler load represents a 14% decrease from the average of the five-year period, 1969 to 1973.

During the past two decades many older vessels have been retired from the partyboat fleet and replaced by a smaller number of larger vessels. This trend is discussed further in a later section of this report. The material conditions of the partyboat industry, that is, the forms of technologies and the environmental conditions in which they are employed are discussed next.

III

RESOURCE AVAILABILITY AND MARKET FACTORS

RESOURCE AVAILABILITY

The California commercial passenger fishing industry has evolved over the past 80 years primarily in response to the availability of fishing resources and passengers at alternative locations. The physical characteristics of the industry, that is, vessel size, maximum passenger capacity, distance and duration of trips, etc., vary considerably from one area of the state to another in response to these conditions. The main factors determining this variability are clearly the regional availability of certain "target" fish species and locational variance in demography.

The California current sweeps down the west coast of North America as part of the great clockwise circulation of water in the north Pacific. The current is cold and rich in nutrients, fed by the frigid upwellings of many deep canyons and sea valleys along its course. The tropical Davidson Countercurrent flows north from Baja along the southern California coast; the interface of these two current systems is the region near Point Conception. The countercurrent is weakest during the winter, when the California current is propelled by northern winds and it is strongest during the summer when the prevailing wind is from the south.

The biological consequences of the cold California current and the tropical countercurrent are reflected in the regional emphases of the passenger vessel industry. In the northern ports of the state where cold water and suitable streams prevail, salmon is king as far as recreational fishermen are

concerned. In southern California the target species, such as yellowtail, barracuda and white sea bass, are generally seasonal visitors; favoring more temperate seas, these species respond to the timing and magnitude of the annual pulsation of the current systems.

The central ports of the state are located near the interface of two ecological zones with access to both warm and cold water species. But the region also represents, respectively, the northern and southern fringes of these biological communities; consequently, individuals of species are not present in numbers as great as they are nearer the center of their ranges. The result is that while Santa Barbara or even Santa Cruz fishermen occasionally catch salmon and/or white sea bass, in neither area could a passenger vessel business be based on these target species.

In the central ports of the state, fishing effort is, therefore, focused on rockfish and kelp bass. In the Bays-Delta region, around San Francisco Bay, the sport fishing emphasis is on striped bass. Table 3 summarizes the principal species by area.

Although a range of vessel type is available in most ports of the state, the target species and other environmental characteristics tend to shape the character of a local fleet. For instance, passenger vessels from northern ports specializing in salmon are generally small. Trolling requires ample space near the stern for each passenger. The ratio of stern area to length is such as to limit vessel length.

TABLE 3

Primary Target Species by Area

<u>Area</u>	<u>Target Species</u>
Crescent City to Bodega Bay	salmon rockfish
San Francisco/ Bays Delta	salmon rockfish striped bass
San Francisco to Avila	salmon rockfish albacore
Gaviota to San Pedro	kelp and sand bass rockfish California halibut (yellowtail) (barracuda) (salmon)
San Pedro to San Diego	kelp and sand bass rockfish yellowtail barracuda albacore bonito

This table indicates primary target species of party-boats by area. Parentheses indicate occasional targets of fishing trips near the interface of two current systems.

Source: California Department of Fish and Game Annual
Reports of Partyboat Landings

Many partyboats from Central and Southern California have developed a pattern of kelp and rockpile fishing that is best from a vessel with a wide beam. Ideally this provides greater stability on deck for novice fishermen, and an abundance of rail space fore and aft for fishing while the vessel is dead in the water. Many of these vessels offer 1/2 to 3/4 day schedules. Due to their often crowded decks and regular disgorging of passengers, these operations are affectionately referred to as "cattleboats"; this style of partyboat does, however, service the majority of the industry's customers and usually at modest fares.

An increasing proportion of the San Diego fleet consists of large, fast and very expensive vessels. These boats are designed to reach distant, tropical fishing grounds quickly. These long-range vessels generally carry fewer passengers than inshore or dayboats, but they provide comfortable accommodations and offer trips (often on a charter basis) of a few days to two weeks in duration. A further discussion of the adjustment of vessel type to local conditions is presented later in this report.

The industry has also adjusted over time to changes in resource availability. For instance, some operators near metropolitan areas have responded to a perceived depletion of near-shore stocks by scheduling longer trips and building larger vessels to reach distant yet more productive fishing grounds. Charter dive vessels, we are told, must travel further from their urban ports to find clear water, a prerequisite for generating return customers. Similarly, the return of the California grey whale has resulted in a new resource for passenger vessel operators. Rather than traditional forms of exploitation, the whales are

now the subject of a growing sightseeing business. Nearly every sport landing south of Santa Cruz offers whale watching tours. This "new" resource has provided an opportunity for many passenger fishing vessel owners to diversify their operation and to increase their revenue base by offering cetacean cruises, especially during the normally slow winter months.

Another resource considered critical to the industry is the anchovy. The anchovy has been described quite seriously as the "life blood" of the southern California partyboat industry. Used both as chum and bait, anchovy, sportsmen claim, are absolutely necessary to catch the kelp bass and tropical game fish such as barracuda and yellowtail. When there is no live bait available, landing operators maintain that their business drops to a fraction of the normal volume. Although fish can be landed using frozen squid or lures, the prospects of a successful catch are greatly diminished without live bait. In the south, only rockfish, it seems, are immune to this requirement. The southern California live bait industry that furnishes these critical resource inputs to the commercial passenger vessel industry is described in Chapter VII of this report.

In the central and northern ports live bait plays a minor role. Salmon, the target species, are taken with jigs and spoons early in the season and as the weeks progress, frozen herring or anchovy are needed. Rockfish and ling are taken with cut bait, frozen herring or squid and lures. Only in the striped bass fishing of the Bays-Delta region does live bait play a part above Gaviota. A small live bait operation exists in Sausalito ancillary to a frozen bait packer.

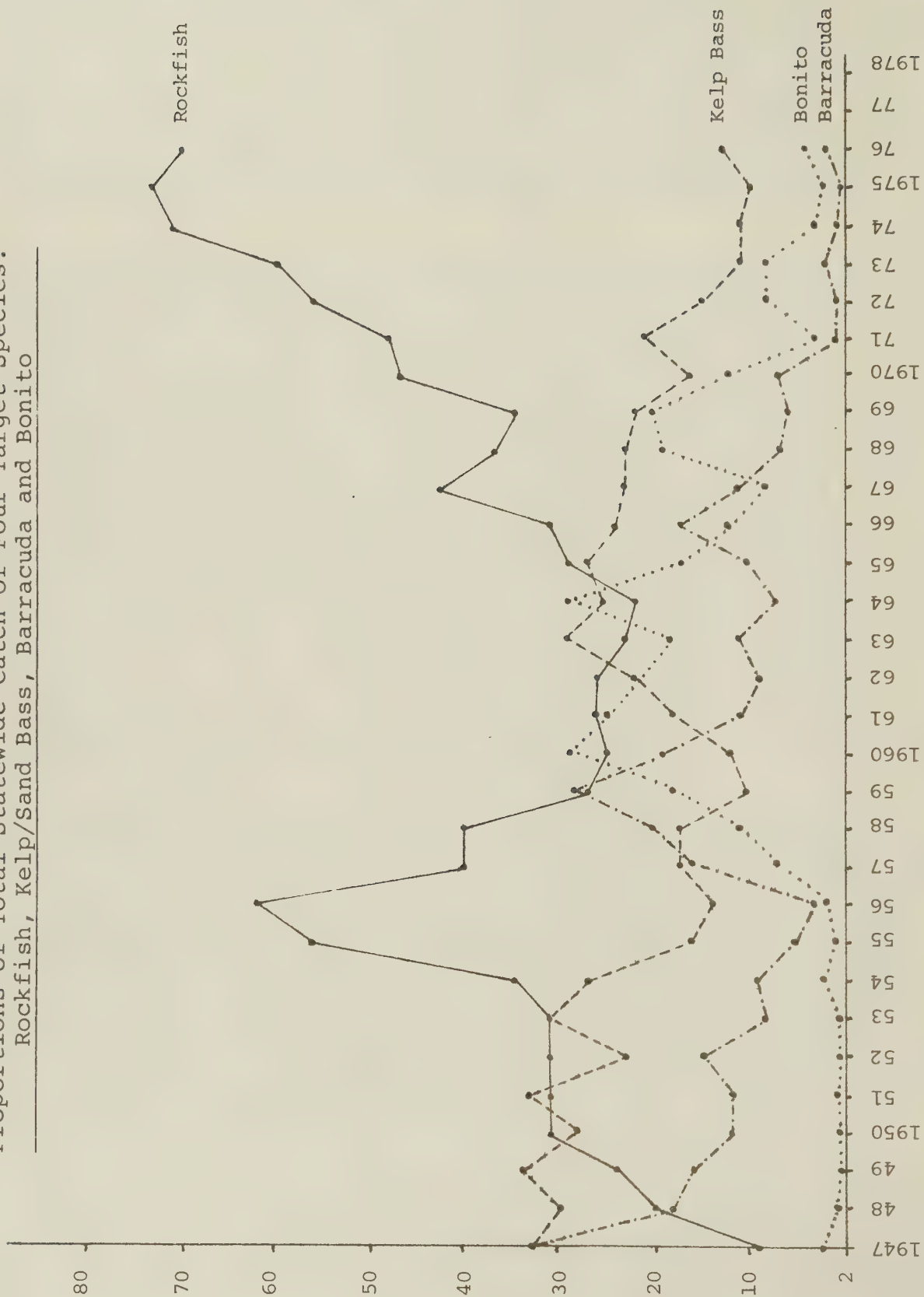
Figure 2 presents the proportions of the total annual partyboat catch of four species. Immediately following World War II, barracuda served as the staple of the partyboat fleet, comprising 33% of all fish landed on partyboats in 1947. In that year, sand and kelp bass accounted for another 33%, while only 9% of the catch was rockfish. Within 10 years the proportions of barracuda and bass had dropped to 3% and 14% respectively; in that year rockfish reached an early peak of 65% of the total catch.

The decade following 1956 was a period of unusually strong tropical current, resulting in an influx of warm water species. This increase in available barracuda resulted in a dramatic shift in effort by sportfishermen away from rockfish. The warm water also brought bonito to the offshore areas of southern California. Bonito fishing became a significant alternative when barracuda resumed their decline following the peak warm water of 1959. It is unclear, but industry spokesmen feel that the damage to the barracuda population was inflicted in the years preceding World War II, when the species was the primary target of both sport and commercial effort.

The dramatic increase in the importance of rockfish to the partyboat fleet is the outstanding trend of the next ten year period. As the proportions of kelp bass, barracuda and bonito continued to decline, effort was again shifted to rockfish. Between the years 1966 and 1975, the combined proportions of bass, barracuda and bonito dropped from 48% to 12.5%, while rockfish increased in its proportion of total partyboat catch from 31% to 73%.

FIGURE 2

Proportions of Total Statewide Catch of Four Target Species:
Rockfish, Kelp/Sand Bass, Barracuda and Bonito



Source: California Department of Fish and Game
Annual Reports of Partyboat Catch.

Concerning the effects of volume and species mix on the value attributed to recreational fishing, it is important to note that vessel operators have sought to maintain approximately the same catch rate over the past 20 years. Figure 3 presents the average number of fish taken per angler along with the total number of anglers carried by the fleet. These data indicate that between 1958 and 1977 the average number of fish caught per angler has ranged between 5.7 and 7.2 fish, or an overall average of 6.6 fish. The average for the first 10 years of this period, when barracuda and bonito were significant factors, was 6.3 fish per angler; during the later phase, when rockfish increased in volume, the average rose to 6.8. That is, during a period that involved substantial fluctuations in passenger volumes (e.g., from 600,000 in 1958, to over 800,000 in the 1970's and back to 700,000 in 1978) and two significant shifts in primary target species due to changes in availability, the average catch per angler has remained fairly constant.

FIGURE 3

Comparison of Average Number of Fish per Passenger
and Total Number of Passengers



Source: California Department of Fish and Game Annual Reports of Partyboat Landings.

Substantial increases in the retail price of fresh fish may have significant impact on the commercial passenger fishing industry. Recent price increases have resulted in a growing protein or food value orientation of partyboat passengers. Industry spokesmen believe that many anglers, especially those selecting rockfish trips, are motivated more by the fillets than by the recreation.

For about \$14, the average price of a 1/2- or 3/4-day ticket, one can expect about 20 pounds of rockfish in the round (about 3 pounds each for 6.8 fish). At the conservative recovery rate of 33%, this amounts to about 6½ pounds of fillet. At the current low price of \$2.79 per pound for "rockcod," this represents a value of \$18.41. At \$3.79 per pound the value increases to \$25.

In many areas of southern California fresh fish is simply not available, which enhances the attractiveness of catching one's own. To an increasing population of retired persons, health and economic considerations coincide, resulting in a protein orientation to fishing. Landing operators informed us during the preparation of this report that they must be very cautious in their pricing structure since even minor increases in senior citizen fares can render partyboat fishing prohibitive to many of those retired persons who depend on it most. Half-day fares for senior citizens range between \$5 and \$10, and many vessel operators between Santa Barbara and Redondo claim that up to 50% of their passengers take advantage of this discount.

SOUTHERN CALIFORNIA SPORT LANDINGS: SUMMARY

There are essentially two forms of sport landings in southern California. One involves landings that are operated from

piers, the other form includes landings that operate from within a marina with convenient access to boat slips. In the former case, access to the vessel is simply a ramp descending from the wharf to which a small floating platform may be attached. The partyboat is tied to the pier only to allow passengers on and off; when not in use these vessels generally remain anchored or on moorings within the harbor.

Southern California landings included in this category are Imperial Beach (near the Mexican border), Seal Beach, Belmont, Redondo, Malibu and Paradise Cove. Generally, these piers are old and they were not originally constructed to be used as sport landings. Many have been upgraded in recent years to make them suitable for passenger vessel use.

Of the sport landings located within marinas, four are in San Diego, one of which is owned by a cooperative of partyboat owners. Other marine type landings are located in Mission Bay, Oceanside, Dana Harbor, Newport Beach, Long Beach, San Pedro, Santa Monica, Oxnard, Port Hueneme, Ventura and Santa Barbara.

The local port authority is usually responsible for maintenance and the city typically owns whatever structures are available and leases them to landing operators under varying arrangements based on a proportion of gross revenue. The most common city or port authority fee appears to be 5% of the gross, but it may be more in cases where there has been considerable recent upgrading of facilities. For individually owned partyboats that are affiliated with a sport landing, the city fee is generally included in the 15% share that is paid to the landing by the vessel.

MARKET FACTORS

The California passenger fishing vessel industry is subject to an interplay of factors, many of which have little to do with

fishing or other marine matters. The volume of passengers served by a particular area and the marketing approach employed by vessel and sport landing owners are a function of the availability of resources and demography.

Clearly, the proximity of a coastal community to densely populated urban areas is directly related to local demand for all marine-related recreation. Simply as a result of demography - a population of millions concentrated within a few hundred square miles bordering on the Pacific Ocean - it is inevitable that the bulk of the partyboat industry will be located in southern California, an area in which the demand for all services is great. The San Francisco area fleet also draws from a large urban market (including Sacramento) as well as from the communities of the interior valleys. This area usually accounts for over 40% of all passengers served from Avila to the Oregon border. Table 4 summarizes the recent pattern of passenger volumes by area.

Passenger fishing vessels located in ports removed from major population centers, such as Morro Bay, Fort Bragg or Crescent City, are more dependent on visitors to their area than most vessels located near urban areas. Partyboat operators in the southern ports and in the San Francisco area, of course, have also benefitted from general tourism but it is estimated that the relative importance is significantly greater in non-urban ports.

In recent years vessel operators offering charter services have enjoyed an increased demand. Increasingly, the groups chartering the vessel are participants in an organized tour and have travelled from out of state. Much of the time, a day's fishing is offered in a visit to the southern California area, but

TABLE 4

Average Proportions of Total Partyboat Passenger Volume
for the Years 1973-1976 by Area and Region

<u>Southern California</u>		<u>Central and Northern California</u>	
San Diego, Mission Bay	19%	Avila, Morro Bay	6%
Dana Harbor, Oceanside	9%	Santa Cruz, Moss Landing, Monterey	6%
Huntington Beach, Balboa	4%	Bodega Bay, Princeton	5%
San Pedro, Long Beach	12%	San Francisco, Bays-Delta	13%
Malibu, Redondo, Santa Monica	15%	Crescent City Eureka, Ft. Bragg	1%
Santa Barbara, Port Hueneme	11%		
Total %	69%	31%	100%

Source: California Department of Fish and Game
Annual Reports of the Partyboat Fleet

increasingly the primary focus of the group vacation is a multi-day charter to fish Mexican waters. In San Diego the long-range passenger trips are particularly important. According to San Diego Port District, 33% of the revenues collected at San Diego Bay passenger vessel landings (\$2,119,558 of a total \$6,375,951 in 1977) were from long-range trips.

The trend for groups to travel great distances to charter a California partyboat is especially evident in that segment of the industry that specializes in sport diving charters. Operators of these vessels report increasing numbers of requests for charters by mid-Western and Eastern dive clubs. These trends can be interpreted as reflections of conditions and trends in the larger economy: access to transportation networks, amount of leisure time and proportion of individual income available for recreation, to name a few. Factors far removed from the marine environment can influence these conditions and significantly affect the demand for some segments of the passenger vessel industry. The form of partyboat operation which seems to benefit most from an expanding economy is the charterboat. The charterboat operator rents his vessel to a group rather than sell individual tickets to passengers on a scheduled trip.

The marketing approach employed by the operators of commercial passenger fishing vessels exhibits a high reliance on an established clientele of repeat customers. This is especially true of individually-owned vessels that operate out of a sport landing where the landing also owns a vessel. In these cases, walk-up customers with no initial preference are normally shunted to the landing's vessels before they are booked on an independently-owned partyboat that pays a commission to the landing.

Most partyboat skippers offering regular, daily schedules attempt to build a following of regular customers. The importance of establishing a reputation for catching fish would seem greatest among those vessel owners who are not affiliated with a sport landing; many of the smaller craft represent businesses conducted from the skipper's home. Lacking public exposure, they rely more heavily on personal recommendation than do vessels operating out of a sport landing.

Landings operators tend to rely heavily on their public visibility to establish the presence of their services. Traditional forms of advertising are employed; additionally there is a marketing technique unique to the partyboat industry, the daily fish count. Most newspapers in the coastal areas of California publish a tally of the number of anglers fishing aboard partyboats from several ports and the composition of their catches. These data are reported to the newspaper by the landings and they usually appear in the sports section near the columns devoted to the scores of athletic events.

Many anglers follow the daily fish count closely and select the landing for their next fishing trip on the basis of the reported catch. Additional pressure to produce is placed on skippers by the fish count since a disappointing catch can affect both that day's fishermen and prospective passengers who monitor the fish count.

Another form of fish count is used in radio advertising. Typically the daily catch is reported over the telephone, live (or seemingly so) from a sport landing. This technique enhances the immediacy of the fish count. Even when reported poorly, the dramatic effect can stimulate subjective considerations - one can almost feel the salt spray.

These marketing approaches are primarily aimed at local customers and they are unique to the partyboat industry. They reflect the unique conditions of this form of recreation. Unlike analogous forms (e.g., deer or duck hunting, trout fishing, etc.), partyboat fishing is easily accessible - one does not need to travel great distances, nor does one require more time than one day. For a few dollars you can be transported to an alien and, ideally, peaceful environment. Additionally, there is the prospect of taking home an edible

souvenir of the activity. The texture of this experience is valued by many residents of the state and by an increasing number of visitors.

Table 5 lists the average price and range of ticket prices for adults charged by partyboats offering scheduled trips to individual passengers. Many sport landings discount the price of 1/2-, 3/4- and full-day tickets for both children and senior citizens. As is clear from the survey questionnaire in Appendix B, the trip types were not specifically defined for the respondent. The implicit definition of each type (1/2 day, 3/4 day, full day, overnight and long-range) may vary among responding vessel operators. The resulting imprecision is probably not significant except possibly for the long-range trips. A 1/2 day or full-day trip is fairly well understood, but many different kinds of trips may be considered to be long-range. San Diego vessels often travel thousands of miles on a long-range trip, while central and northern California vessels may consider a much shorter trip to be long-range. As a result, the reported survey data for the long-range trip category does not necessarily correspond to a particular length or type of fishing trip.

Table 6 lists the ranges and averages of charterboat prices. Some vessels specialize in charter trips while others operating on regular schedules conduct charters only occasionally. Again, the range of charter prices is a reflection of the range of physical characteristics of vessels composing the California fleet.

Vessels included in our survey reported numbers of fishing trips conducted in 1977 ranging from 7 to 500; the average number of trips was 145. Additionally, 53% of our sample conducted an average of 15 commercial fishing trips and 54% of the vessels conducted an average of approximately 30 non-fishing trips each during 1977 (sightseeing, industrial charter, etc.).

TABLE 5

Adult Ticket Prices for
Scheduled Trips Sold to Individuals*

<u>Type of Trip</u>	<u>Average Ticket Price</u>	<u>Range of Ticket Prices</u>
1/2-day	\$ 14.00	\$ 8 - \$ 28
3/4-day	14.50	11 - 18
Full day	23.00	13 - 65
Overnight	48.00	30 - 80
Long-range per day	41.00	35 - 60

*Discounted prices for children and seniors are not included in the non-weighted sample average.

Source: Gruen Gruen + Associates
 Passenger Fishing Vessel Survey, 1978-79

TABLE 6

Average Rates for Chartered Vessels

<u>Type of Trip</u>	<u>Average Price</u>	<u>Range</u>
1/2-day	\$185.00	\$ 90 - \$300
3/4-day	292.00	135 - 450
Full day	452.00	180 - 675
Overnight	675.00	400 - 800
Long-range per day	600.00	600 - (1500) *

*No vessels responding to the survey reported daily charter rates greater than \$600, but independent field work reveals that daily charter rates range at least as high as \$1500/day.

Source: Gruen Gruen + Associates
 Passenger Fishing Vessel Survey, 1978-79

Structural Trends

The most obvious market trend identifiable in the partyboat industry is the increasing volume of business conducted on a charter basis. Although only 4% of our survey respondents indicated that they operate solely by charter, 43% reported that charter trips account for a significant portion of their business.

The increased importance of charters to the partyboat industry is reflected in changing conceptions of optimum vessel size. It was mentioned by industry representatives that vessels currently under construction must be built to accommodate at least a tour bus load (48 passengers) to fully capitalize on the trend toward increased charter business.

The correlation is clear between the charter trend and trends in both the amount and configuration of vessel construction. Other correlations are less obvious. For example, if a vessel is constructed with a capacity of 60 passengers, the owner cannot charge a bulk rate based on his maximum capacity but must establish his charter prices on the basis of 48 passengers or he risks pricing his services out of the competitive range. That is, the influence of tour bus load charters is significant enough to affect the total price structure of partyboat services.

It was reported to us several times that although "game hunters" still comprise a significant portion of the total passenger volume, increasingly divers hunt with expensive, underwater photographic gear rather than spear guns. Actual conflict has occurred on some charters when a passenger proudly lands a large game fish he has speared; on other trips it would be

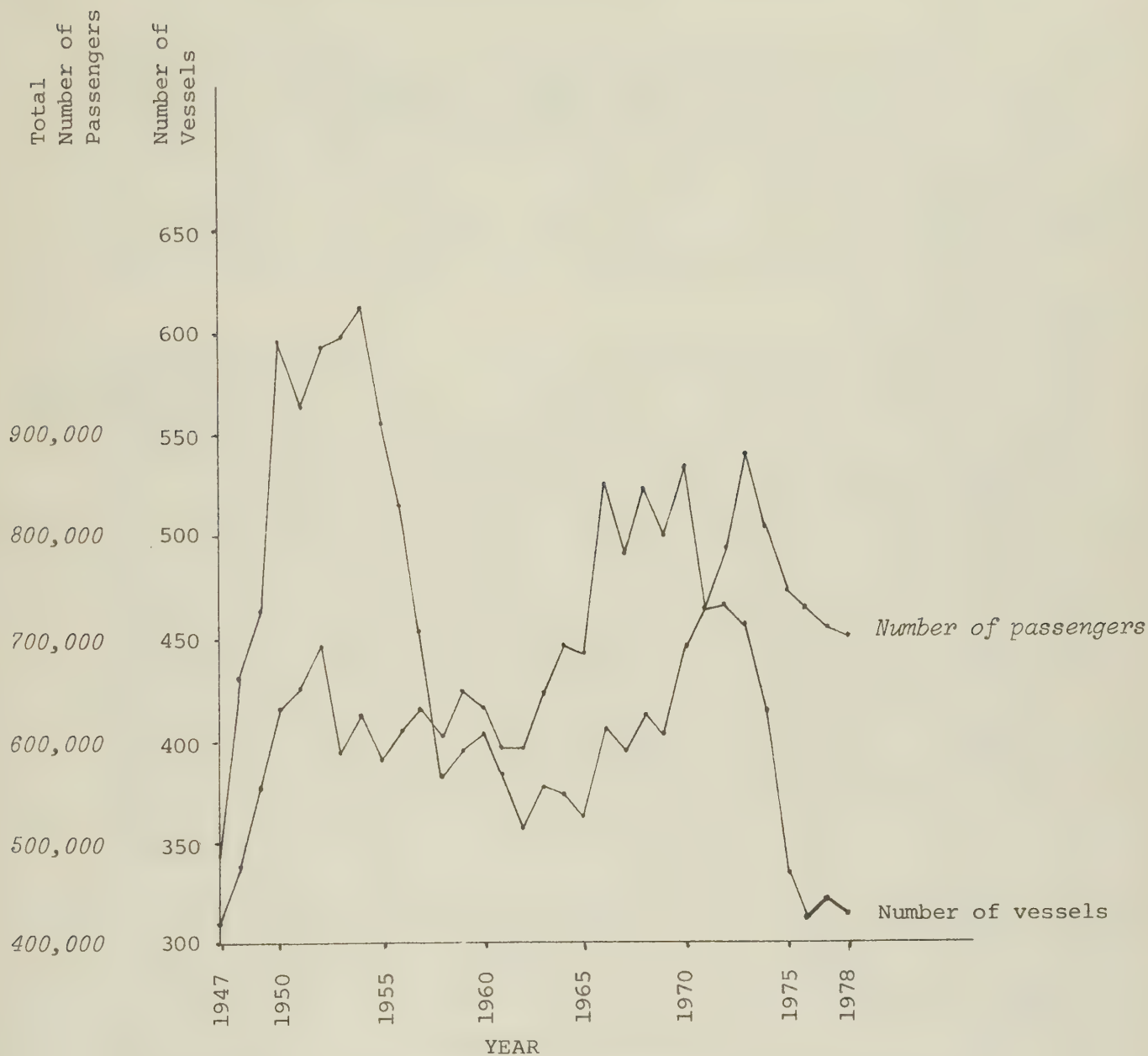
unthinkable to kill more than the abalone or spiny lobster one intends to take home that night. This trend is significant in that it represents a change in the primary objectives of sport dive passengers and their impact on marine resources. It also reinforces our explanation of the second of these related structural trends. That is, the overall decline in total anglers carried by California partyboats in the past decade is a reflection of a general cultural trend away from the "hunting tradition."

The paradox of rapid expansion of a segment of the industry in spite of a general decline in passenger volumes demands further explanation. A part of the explanation suggested by some of the operators we interviewed is that although there have been fewer passengers in recent years, an increasing proportion are willing to spend more money to take longer fishing trips. Figure 4 compares the historical pattern of fleet size with the total number of partyboat anglers served by the fleet each year.

Figure 5 compares the average number of passengers carried per vessel each year with the total number of vessels, or fleet size. These data reveal that the decline in the number of partyboats has outpaced the decline in passenger volume resulting in each unit of the fleet accommodating, on the average, an increased portion of the total annual passenger load.

FIGURE 4

Comparison of Total Number of Passengers
and Number of Vessels



Source: California Department of Fish and Game Annual Reports of Partyboat Landings.

FIGURE 5

Comparison of Average Number of Passengers
per Vessel and Number of Vessels



Source: California Department of Fish and Game Annual Reports of Partyboat Landings.

IV

VESSEL PROFILE BY AREA

The following paragraphs and tables provide a summary of the physical characteristics of the 1977-78 California partyboat fleet. This section also includes a discussion of the types of services offered by passenger vessel operators, and where appropriate, correlations will be pointed out between location, vessel characteristics and marketing approach.

Vessels included in the survey conducted for the current study range from 20 feet to 92 feet in registered length. The average length reported is 54 feet, median length is 55 feet. The most common vessel length reported is 65 feet; over 24% of the sample indicated this length. The next most frequently reported length is 42 feet, representing 8% of the sample. Although the next few paragraphs are devoted to a report of the length and tonnage characteristics of the vessels, in terms of describing the economics of the industry, passenger capacity and trip types have been found to be much more significant indicators of economic similarities among vessels than length and tonnage. These characteristics are discussed later in this chapter.

Table 7 summarizes the geographic distribution of vessels by registered length. Location has been collapsed into two areas to conform to the format used by the California Department of Fish and Game when reporting partyboat statistics. Southern California includes the area from San Diego to Gaviota; data from central and northern California ports are combined. In terms of the total number of vessels, this division has historically been fairly symmetrical. In recent years the southern fleet has been only a few vessels smaller than that of central and northern California.

TABLE 7

Proportion of Total Sample in Each Length
Category by Location of Home Port

<u>Vessel Length</u>	<u>Area of Home Port</u>		<u>Total</u>
	<u>Southern California</u>	<u>Central/Northern California</u>	
20 - 44 feet	14.0%	17.2%	31.2%
45 - 64 feet	20.4%	17.2%	37.6%
65+ feet	25.8%	5.4%	31.2%

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

Our sample revealed approximately equal proportions of vessels in the three categories: 0 - 44 feet (31.2%), 45 - 64 feet (37.6%) and 65+ feet (31.2%). Of those vessels 65 feet and longer, 83% are located in southern ports while only 17% operate in central and northern California. This distribution conforms to the previous discussion of vessel type as a function of target species. Most of the small boats are located in the north where they troll seasonally for salmon. The largest vessels are found in southern ports where they have tapped the major market, transporting anglers practically year-round both inshore and to distant waters.

The registered tonnage of commercial passenger fishing vessels reflects more clearly the correlation of size with geographic area. Vessels smaller than 35 gross tons account for 49% of the current sample; 51% of vessels reported 35 tons or greater. Of those vessels less than 35 tons, 60.4% are located in central and northern ports and of those vessels 35 tons or greater, 75.6% operate from ports located in the southern portion of the state.

The age of commercial passenger vessels represented in the current survey range from one to sixty years old. The average vessel age is 19 years, the median age is 18 years. The most frequently reported year of construction is 1957, with a full 10% of the California partyboat fleet built in that year. Figure 6 illustrates the proportions and number of the 1977 partyboat fleet arranged by five year age categories.

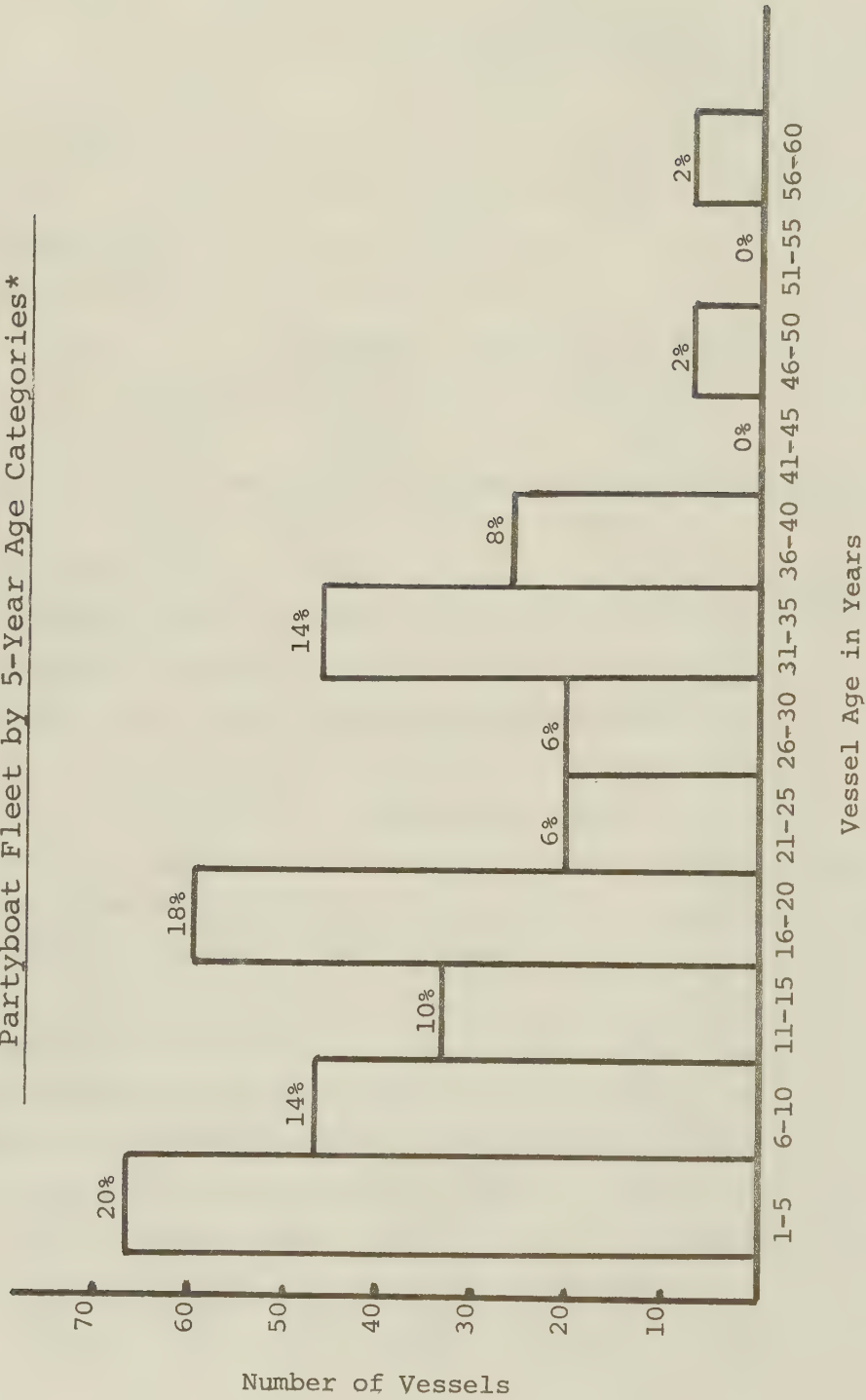
This distribution of vessels is skewed and this distortion supports the representativeness of the current project's primary sample. That is, based on interview data and observations made at the operations level, it is believed that vessels surveyed for this study reflect the extreme longevity of a significant number of hulls. Approximately 1/3 of all partyboats are more than 26 years old; another 1/3 are between 11 and 25 years old and the remaining 1/3 were launched within the past ten years.

We have mentioned the recent general trend of attrition from the fleet. In contrast to this is a simultaneous trend in new construction: nearly 10% of vessels sampled were less than two years old; a full 20% were launched within the past five years.

Assuming the effects of time on vessels of different size are relatively uniform; that is, both small and large craft sink or are retired at the same rate, Table 8 illustrates both the direction and magnitude of this trend. Of those partyboats in our sample that were more than 26 years old, 68% are small, less than 35 gross tons; 32% are greater than 35 tons. The recent trend toward larger partyboats is reflected by the proportion of new vessels in these size categories. Of those vessels launched within the past ten years, 78% are greater than 34 tons; only 22% are smaller craft.

FIGURE 6

Estimated Numbers and Proportions of California
Partyboat Fleet by 5-Year Age Categories*



*Proportions are those of vessels responding to our survey; numbers are estimated by proportion x 328 active vessels.

Source: Gruen Gruen + Associates' Partyboat Survey

TABLE 8

Proportion of Vessels Less Than and Greater Than
35 Gross Tons Arranged in Three Age Categories

<u>Registered Vessel Tonnage</u>	<u>Boat Age</u>		
	<u>10 Years or Less</u>	<u>11 to 25 Years</u>	<u>26 + Years</u>
1 - 34	22.2%	50.0%	67.9%
35 +	77.8%	50.0%	32.1%
Total	100.0%	100.0%	100.0%

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

The types of fishing trips offered by California partyboats include 1/2 day, 3/4 day, full day, overnight, and multi-day excursions. Bookings are either on a walk-on or reservation basis, or the entire vessel is rented, or chartered, for a specified time period or trip type. During the course of a year, some vessels offer a variety of schedules (e.g., full day during the week, 1/2 day on weekends and occasional charter); others are more limited.

Table 9 shows the distribution of vessels from the survey among the variety of possible trip types. Vessels that specialize in full day trips (and offer no other schedules) account for 33% of our sample. Boats engaged in only 3/4-day trips represent over 7% of the sample. The designation 3/4-day is often more of a marketing device than a reflection of time spent on the grounds; these trips frequently involve an entire day. Vessels reporting

only 1/2-day schedules account for 4% of the sample; 2% of vessels run overnight trips only and 4% accept passengers on a charter basis only.

TABLE 9

Trip Types Reported by Survey Respondents

<u>Trip Type</u>	<u>#</u>	<u>%</u>
1/2-day	4	4.3
3/4-day	7	7.4
Full day	31	33.0
Overnight	2	2.1
Charter	4	4.3
Full day and overnight	10	10.6
Overnight and charter	4	4.3
Full day, overnight and charter	10	10.6
Other	<u>22</u>	<u>23.4</u>
TOTAL	94	100.0

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

Those passenger vessels specializing in only one form of trip type account for 50% of the current sample. The remainder of vessels offer a variety of combinations. The most common are "full day and charter" (11%), "full day, overnight and charter" (11%) and "overnight and charter" (4%). One vessel reported engaging in every form of trip type combination.

Of all vessels surveyed, only 30% ever offer overnight fishing trips; 70% of vessels offer trips of one day or less. In the latter category, 38% of vessels are smaller than 45 feet, 36% are between 45 and 64 feet and 26% are 65 feet or larger. Forty-three percent of those vessels taking overnight trips are

TABLE 10

Proportions of Total Sample in Each of
Six Trip Type/Vessel Length Categories

	<u>Overnight/ Multi-day</u>	<u>Full Day or Less</u>
44 feet and under	5%	27%
45 - 64	12%	25%
65 +	<u>13%</u>	<u>18%</u>
	30%	70%

Source: Gruen Gruen + Associates
 Passenger Fishing Vessel Survey, 1978-79

TABLE 11

Proportions of Vessels Conducting Overnight
 and Multi-day Trips, and Vessels Conducting Less
Than Overnight Trips in Three Length Categories

	<u>Overnight/ Multi-day</u>	<u>Full Day or Less</u>
44 feet and under	18%	38%
45 - 64	39%	36%
65 feet and over	<u>43%</u>	<u>26%</u>
	100%	100%

Source: Gruen Gruen + Associates
 Passenger Fishing Vessel Survey, 1978-79

in excess of 64 feet, 39% are between 45 and 64 feet, and 18% are less than 45 feet in registered length. This final category of relatively small vessels offering overnight and even multi-day trips is largely comprised of what are referred to as "executive sportfishing craft." These vessels, located primarily in urban ports, are expensively appointed and provide comfortable quarters to groups of usually six or less. Tables 10 and 11 summarize the relationship between vessel length and trip-types indicated by the results of our survey.

The maximum passenger capacity of vessels included in our sample range from 4 to 120. Both mean and median capacities are 36 passengers. The most frequently reported maximum is 6; 15% of vessels indicated this capacity. Vessels carrying more than 6 passengers are subject to federal regulations concerning construction standards, certification of skippers, and radio equipment.

The second most frequently reported passenger capacity is 49; 10% of the vessels have this capacity. There are two main reasons for the popularity of this capacity. First, Coast Guard regulations require vessels of 65 feet or less in length to have collision bulkheads if they are to carry more than 49 passengers. All vessels over 65 feet in length must have collision bulkheads. Since the construction cost is significantly increased by the collision bulkhead feature, most vessel owners do not seek authorization for more than 49 passengers on vessels less than 65 feet in length. Second, tour buses generally hold 42 to 48 passengers. Consequently, operators catering to organized tours do not have much incentive to construct vessels that carry more than 49 passengers.

Thirty-two percent of vessels reported passenger capacities less than 21; 25% carry 21 to 40 passengers; 30% carry 41 to 60 passengers, and it is estimated that 13% of the fleet is certified for greater than 61 passengers.

These data conform with previous discussions of vessel size/capacity as a function of adjustments over time to local resource availability. For instance, our sample reveals a contingent of small executive sportfishers in southern ports with the bulk of vessels able to accommodate more than 48 anglers. In northern ports, passenger capacity of vessels is far less; Table 12 indicates partyboats responding to our survey with capacities between 48 and 68 passengers, who also operate out of northern California ports, comprise only 18% of the vessels in that category. None of the respondents in the 69 and over category were from northern California ports. On the other hand, 82% of the smaller boats (7-25 passengers) operate out of the northern California ports.

TABLE 12

The Proportion of Active Partyboats in
Each of Five Passenger Capacity Categories Located
in Southern Ports and Central/Northern Ports

<u>Capacity</u>	<u>California</u>		<u>So.</u> <u>CA</u>	<u>Proportion</u> <u>of CA</u>	<u>Central/</u> <u>No. CA</u>	<u>Proportion</u> <u>of CA</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>
1 - 6	53	16.0	38	71	15	29
7 - 25	77	23.4	14	18	63	82
26 - 47	112	34.0	71	63	41	37
48 - 68	63	19.1	52	82	11	18
69+	<u>23</u>	<u>7.1</u>	<u>23</u>	100	<u>0</u>	0
TOTAL	328	100.0	198		130	

Source: California Department of Fish and Game Annual Report to Partyboats 1977 and Gruen Gruen + Associates Passenger Fishing Vessel Survey, 1978-79

In addition to the spatial requirements of salmon fishing, weather and finance contribute to limiting the size of northern partyboats. It should not be surprising that a large vessel requires a large investment, and the operator is compelled to work the boat regularly to survive financially. A relatively short season and frequently adverse weather conditions in the north also work against the conditions conducive to the economic operations of large vessels.

In 1969, the California Department of Fish and Game calculated the percent of partyboat capacity utilized in certain areas of the state for the year 1963 (Young, 20-29). These proportions were derived by dividing the total number of passengers actually carried by the maximum passenger capacity for trips actually made. Using data from our survey, we have calculated the same percentage of capacity utilized in the California passenger vessel fleet by area for 1977.

TABLE 13

Percent of Capacity Utilized* by Region
of the California Partyboat Fleet

	<u>1963</u>	<u>1977</u>	<u>% Change</u>
Northern California	63%	47%	-25%
Bays-Delta	49%	54%	12%
Central California	35%	48%	37%
Southern California	48%	67%	40%
Total Fleet	47%	60%	28%

*Total anglers carried/maximum capacity x trips made.

Sources: Department of Fish and Game, The California Partyboat Fishery, 1947-1967; Gruen Gruen + Associates, Passenger Fishing Vessel Survey, 1978-79

Our estimates are presented along with the 1963 proportions in Table 13. With the exception of northern California partyboats, all regions have experienced an increase in the percentage of capacity utilized. Data from southern California ports indicate the greatest increase, 40%; central ports show a 37% increase; the percent of passenger capacity utilized by Bays-Delta area vessels has increased only 12%. Partyboats located from Bodega Bay to the Oregon border have actually declined by 25% in this measure. This table indicates a geographic distribution of the measure with northern vessels decreasing and the remainder of the fleet increasing in percent of capacity utilized; increases are greatest in southern ports.

These estimates are explainable in terms of changes in the size of the fleet and a redistribution of vessels. In 1963, the total California fleet included 377 active vessels; at that time only 18 were located in northern ports. By 1977, the active fleet had declined to 328 boats, but those operating from northern ports increased by 67% to over 30 partyboats. Between 1963 and 1973, the readjustment of the fleet coincided with a general increase in statewide passenger volumes and a concomitant increase in fleet size; data reveal significant attrition from the fleet only in the past 6 years.

In 1963, a total of 377 vessels accommodated over 688,000 anglers, while in 1977, 328 boats carried 716,500 passengers. The average annual volume of passengers carried by California partyboats in 1963 was 1,706; the average for 1977 was 2,185. The general decline in fleet size since 1963 (a decrease of 13%), the increase in the number of vessels located in northern ports (an increase of 67%), and a 10% rise in passenger volume largely

explains observed local changes in capacity utilization. These factors have resulted in an overall increase of 28% in the proportion of capacity used by the California partyboat fleet.

Vessel operators participating in the current study reported numbers of fishing trips for the year 1977 ranging from 7 to 500 (250 half-day trips). The mean number of trips was 145. Table 14 indicates that in both southern and central/northern California approximately the same proportion of vessels made fewer than 100 trips (23% and 27%, respectively). A smaller proportion of southern boats fished between 100 and 199 trips (43% to 55%), but as the trip/days categories increase the limiting effects of seasonality and northern seas becomes apparent. In the southern California fleet 20% made between 200 and 249 trips compared to 12% of northern boats; 10% of southern boats are included in the range of 250 to 300 trips, while only 6% of the northern fleet fished that much. Over 4% of southern partyboats made more than 300 fishing trips in 1977. The maximum number of trips conducted from a central or northern California port was 268.

TABLE 14

Proportions of Southern and Central/Northern
California Partyboats Arranged by the Number
of Fishing Trips Reported for 1977

<u>Number of Fishing Trips 1977</u>	<u>Southern California Vessels</u>	<u>Central/ Central/Northern California Vessels</u>
Fewer than 100	23%	27%
100-199	43%	55%
200-249	20%	12%
250-300	10%	6%
Over 300	4%	0%
	100%	100%

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

Vessel operators responding to our initial survey indicated an overall average of 93 trips per year to "break even." Median and mode responses were 91 and 100 trips respectively. A further discussion of vessel costs and revenues is included in a later section of this report.

It is estimated that approximately 65% of partyboats also engage in commercial fishing. The proportion of vessels that do make commercial trips is roughly the same in both southern and central/northern California: 63% and 67%, respectively. Table 15 presents the proportions of local fleets that conduct commercial fishing trips. Of those vessels engaging in commercial fishing, over 1/2 made fewer than 10 trips in 1977, and 26% made between 12 and 25 trips. Only 16% of passenger fishing vessels that engage in commercial fishing reported more than 30 commercial trips.

TABLE 15

Proportions of Local Fleets that Do and Do Not Conduct Commercial Fishing Trips

	<u>Some Commer-</u> <u>cial Fishing</u>	<u>No Commer-</u> <u>cial Fishing</u>	
Crescent City to Bodega Bay	70%	30%	100%
San Francisco to Avila	67%	33%	100%
Gaviota to Santa Monica	40%	60%	100%
San Pedro to San Diego	69%	31%	100%

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

A grievance frequently voiced by commercial fishermen concerns the use of partyboats in commercial fisheries. From data gathered during the preparation of this report, it is estimated that approximately 200 vessels in the current partyboat fleet conducted an average of 15 commercial fishing trips each during 1977. This amounts to a total of about 3,000 fishing days. Approximately 58% of this effort originates from southern California ports and 42% from ports north of Avila. A full 50% of all commercial fishing trips conducted by California partyboats originates from ports south of San Pedro; 24% of the total commercial effort is conducted by vessels from the San Francisco area.

Owners of vessels participating in the current study reported purchase dates ranging from 1946 to 1978. The average of purchase dates is 1971; the median is 1974. Over 49% of the vessel owners surveyed purchased their present vessel since 1975; only 16% purchased them more than 10 years ago. Table 16 summarizes this information.

TABLE 16

Proportions of Fleet Purchased by Present
Owner in Three Purchase Date Categories

<u>Year Vessel Was Purchased by Current Owner</u>	
1967 or before	16%
1968 - 1974	35%
1975 - present	<u>49%</u>
	100%

Source: Gruen Gruen + Associates
Passenger Fishing Vessel Survey, 1978-79

Recent Trends

Apparently, there currently is a trend toward the construction of large vessels capable of making long-range, multi-day trips, primarily to the tropical waters of Baja, California. It was reported to us several times by vessel operators that with increasing regularity it has become necessary to travel greater distances from the major population centers to find suitable fishing conditions to satisfy their customers. Additionally, a significant number of people are now traveling considerable distances with the primary goal of either a fishing or scuba diving trip. Having usually incurred some time and expense in travel, these passengers are perceived by the operators as being increasingly interested in long-range trips, rather than one-day or even overnight excursions.

The apparent, or perceived, success of these operations has kindled the desire in many partyboat owners to also tap this growing market. Over 54% of our sample reported that they are planning a major investment within the next 5 years. Over 39% of these planned investments are new, larger vessels; that is, 21% of the total fleet plan to upgrade their operations primarily to take advantage of the recent increase in demand for long-range or multi-day trips.

Another trend visible in the industry is the marked increase in the number of vessels conducting passenger trips for purposes other than fishing; we are referring primarily to whale watching trips. Many vessel operators are clearly enjoying one of the residual effects of the moratorium placed on the taking of California grey whales. Although biologists are unable to assess the extent to which the whale population has revived,

commercial gill netters have a relative measure. Less than 10 years ago, nets could be anchored at favored locations in southern California with the expectation that only once or twice each year they would be damaged by a whale passing through, much like a freight train. Currently, many traditional fishing spots have been eliminated to gill netters for several months during the year by the high probability of near-daily whale damage to gear.

The gill netters' loss has been the partyboat operators' (and of course, the whales') gain. But not all of this trend in the industry is cetacean-oriented. Many sport landing owners have been surprised by the public demand for simple sight-seeing excursions. In many ports, the demand for harbor cruises is not sufficient to support a full-time sight-seeing vessel. Many partyboat operators have found that their vessels are pre-adapted to this use, especially for evening cruises after a day's fishing and clean-up.

Additionally, the owners of larger boats have discovered that a growing proportion of the demand they are experiencing for multi-day trips is also for nonfishing purposes. These owners report an increasing number of "natural history" cruises and they view this trend as leading to a positive diversification of their services.

Approximately 56% of our sample responded that they engage in sightseeing or whale watching trips. Over 71% of these vessels are located in southern California. Although grey whales seasonally migrate offshore past all California ports, weather conditions and a relative lack of market demand have resulted in few northern partyboats exploiting this resource.

THE ECONOMIC CHARACTERISTICS OF THE
COMMERCIAL PASSENGER VESSEL FLEET

COST HOMOGENEOUS CATEGORIES

The previous sections of this report have described the type of vessels in the commercial passenger fleet and the type of trips usually taken by the vessels. From our pretest interviews, literature review and in-depth interviews with owners we learned that the costs of vessel operation vary with both factors - trip type and vessel configuration. We have, therefore, categorized the fleet into vessel and trip type considerations within which costs were likely to be reasonably similar. The following five categories reflect these similarities:

1. Day Boats - Vessels typically not conducting overnight trips and with passenger capacities of at least 28.
2. Small Day Boats - Vessels typically not going out overnight and with passenger capacities of less than 28.
3. Multi-day Boats - Larger vessels that normally conduct trips longer than one day.
4. Executive Sport Fishers - Plush sport vessels usually with sleeping accommodations for 6 passengers.
5. Small Craft - Inexpensive small craft.

It is important to note at this point that passenger capacity and predominant trip type, rather than vessel length, are the primary features critical to an understanding of the allocation of expenses. Boats ranging from 20 to 44 feet in length may have identical passenger capacities but greatly varying costs

A graphic example of this trend toward large vessel size and diversity of operations is the "Condor," currently under construction in southern California and scheduled for launching during the summer of 1979. The vessel is over 90 feet long and she will offer 80 bunks for overnight passengers; the galley will seat 150 people at once! The owner plans to schedule 1/2-day fishing trips during the busy summer season, followed by evening "cocktail cruises." During the remainder of the year, the vessel will be chartered for long-range fishing and natural history trips.

and capabilities. Likewise, vessels of the same length vary considerably in passenger capacity, costs and the types of services offered.

The reasons for this variability were not immediately apparent from the primary survey data. Information gathered during follow-up interviews, however, allowed us to identify appropriate distinctions between vessels with similar characteristics. For instance, we knew from survey data that day boats in the northern ports of the state tended to be smaller than those in the south. During follow-up interviews we became aware of the greater seasonal influence on northern partyboat operations and of the spatial requirements of salmon fishing.

We also learned of the category of vessel known as the "executive sportfisher." These craft normally carry fewer than seven passengers but unlike most vessels of this capacity they tend to be larger and substantially more expensive. These vessels provide plush, comfortable accommodations; they are the type of craft that a wealthy sportsfisherman might purchase for himself. The owners of these partyboats rely almost exclusively on charter trips and they generally charge a higher fee for their services than other vessels making comparable trips.

It is important to distinguish between vessels of this type and other small capacity craft, many of which are open skiffs or fiberglass runabouts. Likewise, a distinction must be made between 44 foot "executive" craft and other vessels of this length carrying 15 to 25 anglers and operating on a regular schedule of half- and full-day trips. It is equally important not to confuse these small dayboats with larger vessels offering similar services.

Vessels conducting multi-day trips tend to be longer and possess greater passenger capacity than other craft, but not all large vessels are multi-day boats. Because their variable expenses and revenues are considerably greater than those of similar vessels operating as dayboats, it is important to distinguish this portion of the fleet on the basis of predominant trip-type rather than on physical dimensions.

The vessels in our follow-up sample of operators willing to share in-depth cost data with us were arranged in the categories on page 49. Table 17 presents estimates of the costs and revenues of the average vessel in each category. We wish to caution the reader that in no cases did we assign implicit wages or opportunity costs to the skipper-owner; that is, nothing was subtracted for the skipper-owners' income. Therefore, particularly for the smaller vessels, the net figure (revenues-costs) is overstated by the value of the skipper-owner's labor.

Variable Costs

As might be expected, variable costs generally increase in both magnitude and proportion of total costs as vessel size and trip length increase. Among our subsample, the proportion of the sum of variable costs range from 56% for a 42-foot day boat to 81% for a 65-foot long-range vessel; the average proportion of total costs is 65%. This is consistent with other estimates of the proportion of variable operating expenses incurred by units of a charterboat fleet (Ditton, Jarman and Woods, 1978: 6).

TABLE 17

Average Costs and Revenues, California Partyboat Fleet

<u>Variable Costs</u>	<u>Dayboats</u>	<u>Dayboats (Small)</u>	<u>Multi-dayboats</u>	<u>Executive "6 packs"</u>	<u>Small Craft</u>
Crew	\$12,270 (30%)	\$ 1,100 (12%)	\$ 27,420 (21%)	\$ 1,800 (8%)	\$ 750 (44%)
Fuel	3,800 (9%)	2,700 (29%)	16,200 (13%)	8,000 (37%)	340 (20%)
Bait	9,000 (22%)	825 (9%)	31,280 (24%)	1,500 (7%)	100 (6%)
Licenses, office, moorage & other services	10,100 (24%)	2,500 (26%)	45,000 (35%)	3,500 (16%)	250 (15%)
Maintenance	6,400 (15%)	2,250 (24%)	8,500 (7%)	7,000 (32%)	250 (15%)
Total Variable Costs	\$41,570 (100%)	\$ 9,375 (100%)	\$128,400 (100%)	\$21,800 (100%)	\$1,690 (100%)
<u>Fixed Costs</u>					
Insurance	4,400 (22%)	2,400 (33%)	7,200 (20%)	4,700 (15%)	400 (35%)
Maintenance	6,400 (32%)	2,250 (30%)	8,500 (24%)	7,000 (22%)	250 (22%)
Imputed Capital Costs	9,000 (46%)	2,700 (37%)	26,000 (56%)	20,000 (63%)	500 (43%)
Total Fixed Costs	\$19,800 (100%)	\$ 7,350 (100%)	\$ 35,700 (100%)	\$31,700 (100%)	\$1,150 (100%)
TOTAL COSTS	\$61,370	\$16,725	\$164,100	\$53,500	\$2,840
	(68% variable; 32% fixed)	(56% variable, 44% fixed)	(78% variable, 22% fixed)	(41% variable; 59% fixed)	(59% variable; 41% fixed)
Revenue	\$76,750	\$39,450	\$208,770	\$61,950	\$6,875
Net*	15,380	22,725	44,670	8,450	4,035

*Before taxes and excluding owner-operators' opportunity wages.

Parentheses indicate average proportion of total variable or fixed costs for that vessel category.

Source: Gruen Gruen + Associates' follow-up interview survey

Both executive sportfishers and small craft tend to confound generalization for similar reasons. The former are inordinately expensive to purchase and maintain (per unit of length), and the latter are to the opposite extreme. This difference, expressed in the ratio of variable to fixed costs (41%/59%; 59%/41%) is coincidentally symmetrical.

Crew costs represent the major variable expense for most of the day boats in our subsample. Proportions range from 12% to 45% of total variable costs, an average of \$12,270 or 30% for larger day boats and \$1,100 or 12% for smaller dayboats. Among multi-day vessels, crew costs account for 14% to 22% of variable costs, an average of 21%. The two categories of smaller craft reported proportions of 8% and 44%. This anomaly is explained by the relatively low variable operating expenses incurred by small boats - annual average of only \$1,688. The operator may pay a friend \$15 per trip to accompany him, resulting in a 50-trip crew cost of \$750, or 44% of all variable expenses.

A plush 44-foot executive craft, however, incurs annual variable costs totalling nearly \$29,000. Owners normally run the boat without crew, but may hire a crewman or a skipper for a shorttime (\$1,800) resulting in an average 8% labor cost.

Table 18 provides the averages of fuel consumed by trip type. Vessels conducting 1/2-day trips ranged between 5 and 125 gallons per trip, an average of 37.7 gallons. Fuel consumption on 3/4-day trips ranged between 20 and 150 gallons and averaged 56.6 gallons. Full-day trips required between 10 and 475 gallons, resulting in an average consumption of 106.3 gallons.

Vessels conducting overnight trips reported a range of 70 to 750 gallons per trip, an average of 327.9 gallons. Fuel consumption for long-range trips in the primary sample exhibited the widest variation: from 110 to 2,500 gallons per trip. The statewide average was 732 gallons per trip. The wide range is partly due to the nature of the questionnaire, which allowed each respondent to define "long-range trip" in his or her own way. The "long-range" category includes vessels making two-day trips to the Channel Islands as well as large high-speed craft designed to fish pelagic species in tropical waters. The latter class of vessel operates out of San Diego. The average fuel consumption for sampled long-range trips out of San Diego was 1,450 gallons per trip. Unfortunately, the largest long-range vessels were not among the respondents to the survey.

Reported fuel costs per day fished were as low as \$7 for a gas-powered salmon skiff and as high as \$378 for a large, high-speed vessel running between San Diego and Baja, California. Dayboats' average daily fuel cost is estimated to be approximately \$31 for larger vessels and \$16.50 for smaller dayboats. The daily fuel cost for multi-day trips is approximately \$146.

Annual fuel costs for partyboats ranged from \$338 for a 6-passenger salmon skiff to \$125,000 for an exceptionally large high-speed craft. This represents a range of 7% to 37% of total variable costs. The average fuel cost for larger vessels making trips of one day or less was \$3,800 in 1977; the average fuel cost for smaller dayboats was \$2,700. The average fuel costs for multi-day vessels was \$16,200. The two largest craft of this type consumed \$125,000 worth of diesel each but their inclusion in this average would cause substantial distortion. The sum of the exceptional vessels' fuel costs will be added to statewide projections made in the following section of this report. Executive sportfishers, often equipped with high-speed diesels or gas engines, consumed an average of \$8,000 in fuel, compared to \$340 for other small craft.

TABLE 18

Average Fuel Consumption per Trip Type

<u>Trip Type</u>	<u>Average of Fuel Consumed per Trip in Gallons</u>
1/2-day	37.7
3/4-day	56.6
Full day	106.3
Overnight	327.9
Long range, statewide	732.5
" , San Diego	1450.0

Source: Gruen Gruen + Associates
 Passenger Fishing Vessel Survey, 1978-79

The importance of live bait to the southern California fleet has been discussed but nothing can make this importance more clear than a comparison of bait costs incurred by vessel operators. Partyboats operating out of ports in central and northern California reported costs ranging from \$100 to \$1,000, representing 6% to 9% of those vessels' total variable expenses. This is almost exclusively frozen bait. Annual live bait costs for southern boats, however, range from \$1,500 to a staggering \$137,000. Bait costs account for 5% to 39% of these vessels' total variable costs.

Additionally, the low-end vessels in this range, the executive sportfishers, typically do not subscribe to a bait hauling service. Also, these vessels usually do not fish as frequently as dayboats or most landing-affiliated craft, consequently operators purchase minimum amounts of live bait only on the basis of need.

Most vessels and landings maintain a contract with a bait hauler to assure themselves of a constant supply of live anchovy. For

this service, partyboat operators are willing to pay a standard 15% of their gross receipts to their live bait hauler. Average live bait costs for southern California dayboats is over \$15,000 per year, \$9,000 for larger dayboats statewide, or 22% of all variable expenses. Multi-day vessels in our subsample averaged \$31,280 per year in bait costs, accounting for 24% of their variable costs.

In evaluating the variable and fixed proportions of annual maintenance costs, a judgment was made to divide the sum of these costs evenly between the two categories. This decision was based on the informed opinions of vessel operators interviewed. A proportion of certain costs, such as hull maintenance, painting, electrolysis prevention and repair, and the deterioration of electronic components through corrosion are incurred regardless of vessel activity. These same costs, with the critical addition of main and auxillary engine maintenance, are functions of variable levels of vessel operation.

The two categories of small vessels in our subsample reported variable maintenance expenses from \$250 for small craft to \$7,000 for "executive" boats. This represents averages of 15% and 32%, respectively, of their total variable costs in 1977. Variable maintenance costs for larger dayboats ranged from \$2,500 to \$17,500, reflecting an average of \$6,400 or 15% of variable expenses; smaller dayboats averaged \$2,250, or 24% of variable costs. Multi-day vessels incurred variable maintenance costs from \$3,500 to \$12,000, resulting in an average of \$8,500 or 7% of all variable expenses.

Although maintenance expenses are greater for larger vessels, the maintenance proportion of total variable costs decreases inversely to vessel size. This is due to the increasing magnitude of other variable costs for larger vessels such as crew, fuel and bait.

The combined costs of licenses, taxes, office space, accounting, advertising and moorage ranged from \$5,000 to \$50,000 for larger dayboats, an average of \$10,100 or 24% of total variable costs for 1977; smaller dayboats averaged \$2,500 or 26% of variable expenses. Multi-day vessels incurred costs of \$21,000 to \$185,000 resulting in an average of \$45,000 or 35% of their variable expenses. The small crafts' costs averaged \$250 or 15%, and the executive sportfishers averaged \$3,500, accounting for 16% of their variable expenses.

Most passenger fishing vessels are affiliated with a sport landing and pay a commission of 7% to 17% of gross revenues from fares to the landing for moorage, booking and sometimes advertising services. Also, vessels must generally pay a proportion of their gross revenues to their local port or harbor authority; this is usually included in the proportion paid to the landing. Since larger vessels tend to carry more passengers and generate larger revenues, they incur greater expenses based on proportions of those gross revenues.

FIXED COSTS

Fixed costs include hull and liability insurance, certain maintenance expenses, and imputed capital cost. Imputed costs refer to the potential revenue that would be generated if the vessel owner were to invest his capital elsewhere; this is computed on the basis of 10% of the market value of the vessel.

Insurance costs range from \$400 per year for small craft to \$13,000 per year for a large, long-range vessel, representing 35% and 13%, respectively, of their total fixed costs. The average proportion of fixed costs accounted for by insurance is generally less for larger, more expensive craft. The average costs for multi-day vessels is \$7,200 or 20% of all fixed costs. Larger dayboats pay an average of \$4,400 per year which represents an average of 22% of their fixed expenses. The small craft in our sample average \$400 per year for hull and liability insurance, representing 35% of fixed costs. Plush executive craft averaged \$4,700 in 1977, or 15% of total fixed expenses.

Annual fixed maintenance costs range from \$250 for a six-passenger salmon boat to \$50,000 for the largest vessels conducting multi-day trips. The average maintenance cost for multi-day vessels is \$8,500, or 24% of their total fixed expenses. Large dayboats averaged \$6,400 per year, representing 32% of fixed costs for maintenance. Executive boats averaged \$7,000 and small craft averaged \$250 per year; both amounts represent 22% of fixed costs.

Finally, imputed capital costs calculated at the rate of 10% of the vessels' market value range from \$500 to \$40,000. The average for long-range vessels is \$20,000 per year, representing 56% of total fixed costs. The average for larger dayboats is \$9,000, or 46%; it is \$2,700 for small dayboats, or 37% of fixed costs. Executive sportfishers incur an average imputed capital cost of \$20,000, or 63%, and small boats incur about \$500, representing 43% of that craft's total fixed expenses.

The seasonality of fish, weather and tourists tend to restrict even the most popular charter vessels from total year-round

operation in their specialty. For instance, more vessels are fishing during the winter months than in the past. Those that do, frequently do not satisfy their customers, whose expectations are based on prime season experiences.

For these reasons, it is believed that the trend toward diversity of operations will continue as additional large craft join the passenger fishing vessel fleet (e.g., natural history cruises, whale watching tours, harbor excursions, industrial charters, etc.). Intensive specialization or diversification of services are the inevitable consequences of this trend in vessel construction; the evidence indicates increased diversification as the most likely mode.

Another consequence of the charter trend concerns the changing relationship between vessel owners and the operators of sport landings. Generally, landings have earned 15% to 18% of the gross receipts of independently owned partyboats for moorage and booking services. But the recent surge in charterboat business has resulted in substantial competition between landings for the affiliation of certain vessels. Landing operators are now willing to negotiate their rate (to perhaps as low as 7%), since a successful charter vessel can guarantee at least \$200,000 worth of business annually.

REVENUES AND NET

As one would expect, the estimated average annual revenues shown in Table 17 vary with the capacities of the vessels. If they operate near capacity, the larger and plusher vessels net greater returns than the smaller vessels. Small craft

appear actually to only provide a tool for owner-operators to earn something for their own labor while staying in an occupation they enjoy. The net revenues of such vessels are probably less than the owner-operators could earn in other pursuits.

VI

STATEWIDE ECONOMIC PROFILE OF THE INDUSTRY

REGIONAL VARIATIONS

The local importance of the commercial passenger vessel industry varies from one California coastal community to another. The availability of target species prized by sportsmen, proximity to and easy access from urban population centers, and other qualities of the surrounding environment contribute to the local demand for partyboat services.

In California, the intensity of passenger vessel activity is greatest in the San Diego-Mission Bay area. Although the San Francisco/Bays-Delta region supports twice the number of vessels, their combined passenger volume is 30% less than that of the San Diego boats. Averaging over a three-year period, 68 San Diego vessels carried a total of 135,908 passengers per year while 122 San Francisco area vessels accommodated 99,719 anglers. Clearly, large modern vessels, the attraction of fishing in tropical waters, and proximity to a major population center have been combined by San Diego area operators, resulting in that area's undisputed preeminence as a center of nearly year-round sportfishing activity.

In comparison, the community of Trinidad, north of Eureka, offers only two commercial passenger fishing vessels with a combined passenger capacity of only 20 anglers. Additionally, this fleet is restricted to less than three months of operation

each year by weather, seasonality of the salmon, and the areas remote location. The composition of the fleet in different regions is discussed in Section IV of the report.

ECONOMIC ACTIVITY OF THE INDUSTRY THROUGHOUT THE STATE

In order to estimate the extent of the industry's economic activity throughout the State of California we extrapolated our estimates of economic activity within each category of vessel configuration and typical trip type to the entire industry. We assumed first that the sample of 94 vessel owners that responded to our survey were relatively representative of the statewide fleet of approximately 328 vessels. The survey data from the 94 respondents and additional information from the follow-up interviews was used to estimate the number of vessels in the state that fell into the five categories used to describe the typical operating characteristics presented in Section V of this report. The estimated number of vessels in each category of the State of California's 1977 passenger vessel fleet are listed in Table 19. Fleet size used in the current report includes only active passenger fishing vessels; licensed boats not reporting to the Department of Fish and Game in 1977 and charter diveboats are excluded. Table 20 presents our estimates of the role that the commercial passenger fishing vessel industry plays in the state's economy. All figures are for 1977.

The manner in which the statewide estimates presented in Table 20 were computed are as follows. The 13 vessel operators selected as a subsample for our in-depth follow-up interviews were chosen to represent the five categories of vessel and trip type discussed in a previous section; this categorization was selected because it was found that costs were most homogeneous

TABLE 19

Estimated Numbers of the 1977 California Commercial
Passenger Vessel Fleet in Five Categories

<u>Category</u>	<u>Number of Vessels</u>
Dayboats	180
Small Dayboats	44
Multi-Dayboats	21
Executive Sport Craft	20
Small Craft	<u>63</u>
TOTAL	328

Source: Gruen Gruen + Associates Survey and Follow-up
Interviews.

TABLE 20

Statewide Costs and Revenues, California Partyboat Fleet

<u>Type of Cost</u>	<u>Amount</u>
Crew	\$ 2,916,000
Maintenance	3,170,500
Bait	2,349,500
Fuel	1,574,500
Capital	2,716,500
Insurance	1,168,000
Licenses, Office, Moorage and Other Services	2,959,000
Total Costs	16,853,500
Revenue	21,607,000
Net*	4,753,500

*Before taxes and excluding owner-operators' wages or opportunity costs.

Source: Gruen Gruen + Associates' Survey and Follow-up
Interviews.

when vessels were grouped in terms of similarities in trip type and configuration. Based on Department of Fish and Game information concerning the distribution of vessels by passenger capacity and on data gathered during both the primary and follow-up surveys, a judgment was made concerning the approximate number of vessels in each category. These estimates, presented in Table 19, were checked against the informed opinions of several industry representatives for both accuracy of numbers and the representativeness of those vessels included in the subsample. To project statewide totals of costs and revenues we then multiplied the estimated number of vessels in each category of the fleet in 1977 by the average costs and revenues for vessels in that class. The products of these computations were added and they represent the statewide totals of costs and revenues presented in Table 20.

Table 21 includes the numbers and proportions of vessels in the 1977 California partyboat fleet by area. These numbers represent active vessels only; that is, only those craft reporting at least one commercial passenger fishing trip to the Department of Fish and Game in 1977 are included. The locational distribution of these vessels is compared with that of the survey respondents in Table 22. As can be seen, according to this comparison, the San Francisco Bay and Delta area is the only area that is substantially undercounted and the San Pedro, Long Beach area is the only area substantially overcounted.

TABLE 21

Numbers and Proportions of Total Active
1977 Passenger Fishing Vessel Fleet by Area*

	<u>Number of Vessels</u>	<u>Proportion of Total Fleet</u> <u>%</u>
Crescent City, Eureka, Fort Bragg	10	3.0
San Francisco, Bays-Delta	101	31.0
Bodega Bay, Princeton	18	5.5
Santa Cruz, Monterey, Moss Landing	18	5.5
Avila, Morro Bay	18	5.5
Santa Barbara, Port Hueneme	24	7.0
Malibu, Redondo, Santa Monica	12	3.5
San Pedro, Long Beach	32	10.0
Huntington Beach, Balboa	9	3.0
Dana Harbor, Oceanside	14	4.0
Imperial Beach, San Diego, Mission Bay	72	22.0
TOTAL	328	100.0

*Includes only active passenger fishing vessels. Licensed craft not reporting, charter dive boats and fishing barges are excluded.

Source: California Department of Fish and Game
Annual Report to Partyboats, 1977

TABLE 22

Comparison of Active Vessels in 1977
with Survey Respondents by Area

<u>Area</u>	<u>Vessels Reporting Catches</u>		<u>Respondents</u>		<u>Difference</u>
	<u>#</u>	<u>%</u>	<u>#</u>	<u>%</u>	<u>%</u>
Imperial Beach, San Diego Mission Bay	72	22.0	24	25.5	+ 3.5
Dana Harbor, Oceanside	14	4.0	2	2.1	- 1.9
Huntington Beach, Balboa	9	3.0	--	--	--
San Pedro, Long Beach	32	10.0	18	19.1	+ 9.1
Malibu, Redondo Beach, Santa Monica	12	3.5	3	3.2	- 0.3
Santa Barbara, Port Hueneme	24	7.0	9	9.6	+ 2.6
Avila, Morro Bay	18	5.5	--	--	--
Santa Cruz, Moss Landing, Monterey	18	5.5	5	5.3	- 0.2
Bodega Bay	18	5.5	9	9.6	+ 4.1
San Francisco Bay and Delta	101	31.0	19	20.2	-10.8
Crescent City, Fort Bragg, Eureka	10	3.0	4	4.3	+ 1.3
Other	--	--	1	1.1	--
TOTAL	328	100.0	94	100.0	

Source: California Department of Fish and Game Annual Report to Party-boats, 1977 and Gruen Gruen + Associates' Passenger Fishing Vessel Survey, 1978-79.

CAPITAL

The reported purchase price of California commercial passenger fishing vessels range from \$2,000 to \$300,000. The average price paid was nearly \$86,000, but the median price reported was only \$60,500. Approximately 11% of vessels in the fleet were purchased for \$200,000 or more; 12% of the vessels were purchased for \$10,000 or less. These survey results may understate the capital value of the fleet somewhat, because a recently constructed vessel is reported to have cost \$1.2 million.

More than owners of almost any other type of business, the owners of fishing vessels, both passenger and commercial, are keenly aware of their equipment's present market value. This is due to the relatively high rate of vessel resale discussed above, and the constant processes of maintenance and evaluation of alternatives. For this reason it is believed that the responses we received to questions concerning the present market value of vessels are informed and accurate.

The mean estimated market value of passenger fishing craft responding to our survey in 1977 is over \$118,000; 50% of the vessels were evaluated at greater than \$85,500. It is estimated that 20% of the fleet is worth at least \$200,000 each, and less than 4% of passenger boats have present market values of \$10,000 or less. Based upon this evaluation and a fleet size of 328 active vessels, it is estimated that total fleet value is presently in excess of \$38.7 million.

Table 23 summarizes the correlation between vessel value and size in the California partyboat fleet. It is estimated that 90% of the vessels with registered tonnage less than 35 tons are currently valued at \$85,000 or less, while only 10% of these smaller craft are worth more than \$85,000. Of those vessels in excess of 35 gross tons, 86% are valued at greater

than \$85,000 and 14% have market values less than \$85,000. This latter category largely represents the older boats in the fleet.

These estimates reflect an average increase of over 38% in the market value of vessels since their most recent date of purchase. The values presented are predicated upon a continued healthy market for vessels. It is important to note that those vessels less specialized in design have greater potential for adaptation to other uses.

TABLE 23

Correlation of Size and Present Market Value
in the California Partyboat Fleet

<u>Registered Tons</u>	<u>Market Value \$85,000 & Under</u>	<u>Over \$85,000</u>	
35 & less	90%	10%	100%
35+	14%	86%	100%

Source: Gruen Gruen + Associates Passenger Fishing
Vessel Survey, 1978-79.

CREW WAGES AND SALARIES

Survey results indicate that 82% of vessels are owner-operated; the remainder are run by hired skippers. While deck crew normally receive between \$15 and \$35 per day, skippers are paid \$45 to \$100 per day. It is estimated that the total annual payroll for the skippers and crew of California partyboats is currently in excess of \$2.9 million. It is further estimated that approximately two-thirds of this amount is paid

in southern California and one-third to employees of vessels north of Gaviota. Table 20 presents a projection of total statewide costs and revenues for the passenger fishing vessel industry.

BAIT COSTS

Bait costs amounted to \$2,349,480 in 1977. Nearly all of these expenses were incurred in southern California where the availability of live bait is considered critical to the industry. Our information indicates a fleet of 21 active bait boats servicing partyboats in southern California. Each vessel employs an average of 3 crewmen and 40% of the bait fleet is operated by hired skippers. This results in the additional employment of 63 crew and 9 skippers.

MAINTENANCE

Table 20 indicates that maintenance costs involved the largest category of expenses totaling over \$3 million for the California partyboat fleet in 1977. This includes expenditures for materials and specialists' services such as paint, hull repair, haul out and electronics maintenance and repair. It is estimated that approximately 75% of these expenses were incurred in southern California.

CAPITAL

The total cost of capital, reported at the rate of 10% of vessels' market value amounted to over \$2.7 million during the year of the current study.

The residual category of expenses for licenses, office space, accounting, mortgage, advertising and other services amounted to a statewide total of \$2,958,750 in 1977. Since most large vessels are affiliated with a landing, it is this amount from which landing operators and their shore-side employees draw income and profit.

FUEL

It is estimated that the California partyboat fleet spent nearly \$1.6 million on fuel in 1977. It is further estimated that over 75% of this fuel was consumed by vessels operating south of Point Conception.

It is expected that substantial increases in the price of diesel fuel would have a negative impact on the partyboat industry, resulting in an attrition of vessels from the fleet. It is unclear to what degree the recent decline in the number of vessels is attributable to rising prices. It is clear that reduced availability of gasoline would have a dramatic effect on the volume of business conducted by partyboats. This effect would probably be relative and in proportion to the degree to which mobility is restricted. Decreased accessibility to coastal areas would result in a decline in market demand, that is, fewer passengers.

REVENUES

Finally, it was mentioned earlier that projected statewide revenues from both our primary and follow-up surveys amounted to approximately \$21.6 million. It is estimated that total expenses for the fleet are approximately \$16.8 million. The difference between these sums, referred to in Table 20 as net does not include taxes, or owner-operators' opportunity wages.

Results of surveys conducted during the current study indicate individual California partyboat gross revenues ranging from \$2,000 to over \$900,000 per year. One-half of the vessels included in our primary sample reported gross revenues of \$50,000 or less; the remainder of the sample reported revenues in excess of \$50,000 for 1977. We estimated statewide total partyboat revenues by multiplying the number of active vessels in the fleet (328) by the average revenue of \$65,870 from the survey sample. However, our average is taken from the responses to a survey which is not perfectly representative of active vessels in each port (see Table 1). In order to estimate revenue by area, we multiplied the number of reporting vessels at each location by the average revenue of the vessel operators responding to the survey from each of these locations. The results of this estimating procedure are shown in Table 24. There were 27 vessels reporting from the Balboa and Morro Bay areas, but there were no survey respondents from these areas so the average revenue for the entire sample was used to estimate total revenues.

We had expected to discover substantial revenues from the rental or sale of fishing gear and galley items. It was our

TABLE 24

Estimated Commercial Passenger
Vessel Revenue (1977) by Area

	<u>Average Gross Revenues per Vessel* (1977)</u>	<u>Active Vessels**</u>	<u>Estimated Total Revenue</u>
Imperial Beach, San Diego, Mission Bay	\$105,527	72	\$ 7,598,000
Dana Harbor, Oceanside	95,000	14	133,000
San Pedro, Long Beach	82,529	32	2,641,000
Malibu, Redondo Beach, Santa Monica	86,000	12	1,032,000
Santa Barbara, Port Hueneme	81,500	24	1,956,000
Santa Cruz, Monterey	52,800	18	950,000
San Francisco Bay and Delta	27,563	101	2,784,000
Bodega Bay, Princeton	43,850	18	789,000
Crescent City, Fort Bragg, Eureka	17,667	10	177,000
Areas not represented in survey ***	65,870	27	1,778,000
		TOTAL	\$19,838,000

*Gruen Gruen + Associate Fishing Vessel Survey

**California Department of Fish and Game Annual Report to Partyboats

***The Balboa and Morro Bay Areas were not represented in the survey, so the mean gross revenue figure of \$65,870 from the survey was used to estimate total revenues for these areas.

experience, however, that fishing rods, reels and other gear are generally rented and sold by sport landings rather than the vessel operator; those vessels not affiliated with a landing usually provide gear without a rental fee as part of their service. Small items, such as hooks and sinkers, are often offered for sale aboard, but generally more of these items are given to passengers than are sold. Likewise, the vessels' galley, although potentially profitable, is frequently a source of concern to operators. Besides the tendency for the deck crew to literally eat the profits, an additional employee is required to handle galley sales.

Most of the vessel operators interviewed have "leased" their galley to an individual in exchange for some minimal service such as providing toilet paper and towels and keeping the lavatory clean. Revenues accruing to vessels which do operate a galley were determined to be negligible.

SUMMARY

Over the past 80 years the California passenger fishing vessel industry has responded to changes in both resource availability and market demand. The vessels in the partyboat fleet exhibit a wide range of size, passenger capacity and services offered, but generally the physical and demographic conditions of the northern coast tend to limit these dimensions.

The most salient current trend identified in this report concerns the attrition of older vessels from the fleet and their replacement by fewer, larger boats, capable of travelling long distances to tropical fishing grounds. We have also discussed the paradox of this growth trend occurring concomitantly with a general decline in total passenger volumes.

Although the value of partyboat fishing to recreational anglers was not a primary concern of the current report, we have suggested an alternative perspective for the differential evaluation of target species. This topic, however, is the least subject to objective assessment of those confronting policy-makers concerned with recreational fishing.

Finally, we have presented descriptions and accountings of the component costs and the revenues of vessels in the California partyboat fleet. Based on these data, projections were made to compile an economic profile of the passenger fishing vessel industry. All aspects of this industry appear to currently exhibit various degrees of change. This should not be surprising since the industry is so closely linked to the dynamics of the sea and to a constantly evolving social and economic system.

To forecast the future of the industry would require greater insight into the demand for passenger vessel trips of various types. While our study of the industry has shed some light on market demand, the National Marine Fisheries Service has commissioned a separate study to measure this dimension.

ECONOMIC PROFILE OF THE
SOUTHERN CALIFORNIA LIVE BAIT INDUSTRY

INTRODUCTION

Until the anchovy management plan became effective in August of 1978, all catch statistics for the live bait industry were provided by fishermen on a voluntary basis. Although it is now required of these fishermen to submit logs indicating their fishing activity and production, the nature of the commodity is such as to inhibit total cooperation. It has not been so much a matter of maintaining the secrecy of fishing success that has inhibited some bait fishermen from submitting logs, as it is the manner in which they work and transfer their product.

Department of Fish and Game personnel have developed an improved log format which is currently resulting in richer and more reliable biological data than has been possible in the past. Also, information concerning resource availability is gathered through questions tapping fishing effort and conditions (e.g., number of sets to make bait). Based on these data the estimated catch of the southern California live bait fleet was 6 - 7,000 tons in 1978. Because of the broader data base, it is believed that live bait estimates are increasing in accuracy.

LIVE BAIT: MARKETING

Live bait boats also collect a fee based on gross revenues from passenger fares; the range is between 12% and 15%. Bait boats generally moor at city facilities rather than at sport landings. The bait fisherman usually owns several bait receivers which are moored containers (approximately 10' x 20' x 10' deep) in which anchovy are kept alive within the harbor.

Each partyboat has a designated receiver (some are partitioned for multiple use), and it is the bait fisherman's contractual responsibility to maintain a minimum availability of anchovy. But since there is only one bait hauler per port and more importantly because partyboat operators are familiar with the vicissitudes of the sea, the contract is primarily a pro forma device to which rigorous attention is rarely paid.

It was mentioned previously that live bait fishermen also sell bait to individual recreational anglers. Many small private boats are equipped with a tank capable of holding live bait. The typical rate is \$6 to \$8 per scoop. It is difficult to estimate the proportion of all live anchovy that is sold to this market. Some bait fishermen specialize in selling bait by the scoop from receivers within a harbor, while others concentrate on volume deliveries to partyboats for a share of their business. Based on interviews with live bait fishermen, it is estimated that "retail" rates account for 15% to 25% of the total live bait catch; sales to commercial tuna boats account for less than 2% of the bait fleet's business.

LIVE BAIT FLEET: DESCRIPTION AND SUMMARY OF COSTS

There are currently 21 active vessels in the southern California live bait fleet. Twelve of these craft are primarily full-time live bait "catcher" or net boats; six vessels are more seasonally restricted to part-time bait fishing, and three vessels are employed as live bait carriers only. Carriers are used in the San Diego and Redondo areas, these craft do not carry nets but they are equipped with live bait wells. When a successful "set" has been made on a school of anchovy, the carrier is brought alongside the net boat and bait is brailed aboard both vessels. Each craft then proceeds to the distal ends of their customer list to replenish their receivers before the pre-dawn departure of the partyboats. Some bait boats occasionally rendezvous at sea with their client partyboats to "bait up".

Table 25 provides a summary of the composition and location of the live bait fleet. It is important to note that "full-time" may be a slightly misleading label for the largest category of the fleet. Although those vessels with contracts to supply partyboats are generally obligated to supply bait year round, the intensity of the activity is highly seasonal. From the beginning of May to the end of September, most bait boats are fishing nearly seven days each week. During the winter it may require as many days just to locate a school under fishable conditions, but the demand for live bait is considerably less during these months and fewer vessels are involved.

TABLE 25

Location and Composition of the
Southern California Live Bait Fleet

Morro Bay	1 net boat (spring only)
Avila (Port San Luis)	1 net boat (spring only)
Ventura	1 net boat
Oxnard	1 net boat
Port Hueneme	1 net boat
Paradise Cove	1 net boat
Redondo Beach	1 net boat, 1 carrier boat
Long Beach - San Pedro	1 net boat, 2 seasonal net boats
Newport	1 net boat, 2 seasonal net boats
Dana Harbor	1 net boat
San Diego	3 net boats, 2 carrier boats, 1 spotter aircraft
Oceanside	1 net boat

Source: State of California, Department
of Fish and Game

VARIABLE COSTS

Table 26 indicates the average costs and revenues of live bait vessels included in our sample. Fishermen interviewed during the current study reported annual crew and labor costs ranging between \$12,000 and \$65,000 in 1978. The average labor cost was \$50,400 per vessel, or 81% of all variable expenses. Each boat employs an average of 3 crewmen and it is estimated that 40% of the bait fleet is operated by hired skippers. Additionally, each vessel typically employs at least one other person for part-time, shoreside duties. These data reflect a fleet employment of approximately 63 crewmen, 9 hired skippers, 12 owner-operators, and at least 21 auxillary personnel.

TABLE 26

Average Costs and Revenues of
Southern California Live Bait Vessels

Variable Costs

Crew	\$ 50,400	(81%)
Vessel Maintenance	4,000	(6%)
Fuel	7,700	(13%)
Total Variable Costs	\$ 62,100	(100%)

Fixed Costs

Insurance	\$ 5,000	(13%)
Vessel Maintenance	4,000	(10%)
Receiver Maintenance	2,500	(6%)
Imputed Capital Costs	25,000	(62%)
Licenses, Office, Moorage and Other Services	3,600	(9%)
Total Fixed Costs	\$ 40,100	(100%)

Total Costs	\$102,200	(61% variable; 39% fixed)
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Average Gross Revenue	\$125,000*
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Parentheses indicate proportion of total fixed or variable costs for that vessel.

*Before taxes, and excluding owner/operators' opportunity wages.

Source: Gruen Gruen + Associates' follow-up interview survey

As in the case of partyboats, a judgment was made to divide total maintenance cost evenly between fixed and variable expenses. This calculation is supported by the informed opinion of vessel operators and results in an average variable maintenance cost of \$4,000 per boat, or 6% of variable expenses.

Reported fuel costs ranged from \$2,000 to \$10,000 per vessel. The average fuel cost for units of the live bait fleet was \$7,700 in 1978, representing 13% of the vessels' variable expenses.

FIXED COSTS

Unlike partyboats, customer liability insurance is not required of live bait boats. Hull insurance averages around \$2,500 per vessel, but most owners also insure their gear. Lampara nets and especially purse seines are quite expensive. Including the deck machinery, such as winches and hydraulic systems, and the plumbing and holding equipment necessary to haul live bait, gear costs frequently exceed the value of the vessel alone. Because of this investment, gear is also usually insured against loss. Average total insurance costs for 1978 were estimated to be \$5,000 per vessel, or 13% of the fixed expenses.

Fixed maintenance costs averaged \$4,000 per boat, representing 11% of fixed costs. Each vessel also owns an average of five bait receivers which required approximately \$500 worth of maintenance each last year. This involved \$2,500 per boat for an average of 6% of all fixed costs. These expenses are included in the fixed category because the maintenance is primarily bottom scraping and painting which are essentially independent of use.

The cost of capital imputed at the rate of 10% averaged \$25,000 per vessel, accounting for the largest proportion of all fixed expenses, 62%. This estimate is based on the market value of vessels and gear, and the replacement cost of receivers. Vessels ranged in value between \$60,000 and \$750,000; the average was in excess of \$200,000. Receivers are valued at \$4,000 each and there are approximately five per bait vessel.

Licenses, office space, moorage and other services amounted to an average of \$3,600 per vessel in 1978. These costs represent 9% of all fixed costs. It is important to note that

these costs were calculated as variable expenses for partyboats and as fixed expenses for live bait vessels. Partyboats generally pay a proportion of their gross revenues to a landing in exchange for these services, while live bait fishermen must pay rent, moorage, etc. whether they fish or not.

Total costs for units of the southern California live bait fleet averaged \$102,200 in 1978. Variable expenses amounted to \$62,100, or 61% of total expenses, and fixed costs amounted to \$40,100, or 39% of all expenses.

Average gross revenues from vessels in our sample were approximately \$125,000. Very little commercial fishing is conducted by the bait fleet. A few of the vessels seasonally fish mackerel and squid. Others have intended to fish anchovy for reduction, but generally the demand for live bait and frequent difficulty in locating schools is such as to inhibit regular diversification of their operation.

ECONOMIC PROFILE OF THE INDUSTRY

Table 27 summarizes the projected costs and revenues of the southern California live bait fleet. All of these expenses are incurred south of Morro Bay.

A total of nine vessels, representing 43% of the live bait fleet, were surveyed during this phase of the current study. To compute industry-level projections of total costs and revenues, the component costs and revenues of the nine vessels surveyed were averaged and multiplied by 21, or total fleet size. Since two of those craft sampled were employed only part-time, it is believed that these projections accurately reflect the economic profile of the southern California live bait fleet.

TABLE 27

Total Costs and Revenues of
Southern California Live Bait Fleet

<u>Cost</u>	<u>Amount</u>
Crew/labor ¹	\$1,058,400
Maintenance	220,500
Fuel	161,700
Capital	525,000
Insurance	105,000
Licenses, office, moorage and other services	<u>76,600</u>
Total Costs ²	\$2,146,200
Total Revenues	\$2,625,000

¹This includes wages and salaries for 63 crew members, 9 hired skippers and 21 shoreside personnel.

²Before taxes, and excluding owner-operators' opportunity wages.

Source: Gruen Gruen + Associates' follow-up interview survey

In order to test the veracity of economic data gathered from both partyboat and live bait boat owners during the follow-up interviews, we have compared the estimated total live bait cost of the partyboat fleet with the estimated total revenues generated by the bait fleet. Partyboats indicated a statewide total bait cost of \$2,349,480. Assuming that no more than \$150,000 of this amount was spent for frozen bait in northern ports, a total fleet cost of \$2,199,480 for live bait is estimated. This amount represents 84% of the \$2,625,000 reported by bait operators. These data are consistent with previous reported estimates of market proportions based on bait fisherman interviews (15% - 25%) and with bait cost estimates by partyboat operators. This cross-check increases the investigators' confidence in the accuracy of the projections made in the current report.

APPENDICES

APPENDIX A

SURVEY METHODOLOGY

Gruen Gruen + Associates conducted two surveys from November 1978 through January 1979 for this study. The first was a mailed survey of all licensed commercial passenger fishing vessel operators in California. The second was a follow-up in-person interview with a random selection of those who responded to the mailed survey and indicated that they would be willing to participate further in the study. The sampling designs and techniques of administration of these two surveys are discussed in this appendix. The mail questionnaire and the general outlines used for the follow-up in-person interviews are shown in Appendix B.

MAIL SURVEY

In November of 1977 Gruen Gruen + Associates (GG+A) conducted a series of interviews with members of the commercial passenger fishing vessel industry in order to gather information to aid in the design of the survey questionnaire instrument. A pretest of the questionnaire was conducted in late November and early December of 1977. Once the questionnaire was finalized, it was sent to the Office of Management and Budget (OMB) for approval.

OMB approval was not received until late May 1978. At this time the commercial passenger fishing vessel operators were well into the fishing season, so it was decided that the questionnaires should not be mailed out until mid-Fall 1978.

The sample used for the mailing of this questionnaire, was all registered passenger fishing vessels in 1977. To obtain a

list of these vessels and their owners or operators, the actual licenses issued by the state were used. Originally the sample consisted of 326 owner/operators and 354 vessels. In October of 1978 one questionnaire was sent out per vessel with those owners of more than one vessel receiving multiple questionnaires. Enclosed with the questionnaire was a letter from GG+A introducing the study and a self-addressed stamped envelope. Members of the Golden Gate Sports Fishers also received a letter from their president, Roger Thomas, encouraging their participation in the survey. Bill Nott, president of the Sportfishing Association of California, did not send a letter to be included in the mailing, but said he would put a notice in his newsletter encouraging members to complete the survey when they received it.

After the questionnaires were actually sent out in the mail, some respondents contacted GG+A requesting additional forms because they had more vessels than had been accounted for. Other respondents simply put the data for more than one vessel on an individual form. This increased the sample from the 354 vessels to 368.

Sixty-nine completed questionnaires had been received by the end of 1978. This represented 19% of the universe which was lower than what we had hoped to achieve, so a follow-up mailing was conducted. There were 246 operators contacted in the follow-up, excluding those who had already responded, those who said they would not participate, and those whose addresses were incorrect in the first mailing. The follow-up mailing consisted of a copy of the questionnaire, the cover letter, a self-addressed stamped envelope and a postcard. The postcard explained that this was a second mailing and asked the vessel

operators to complete the questionnaire as soon as possible if they had not already done so. (A copy of the postcard can be found in Appendix B.) Half of the postcard was designed to be torn off and returned to GG+A. On this half, we asked the respondents to indicate if they had already returned the questionnaire, intended to return it or refused to participate. If they refused, we asked them to tell us where their vessels were moored and how many passengers they held. Unfortunately, very few cards were returned with these last two pieces of information, so no conclusions could be drawn about the non-respondents.

As of January 22, 94 completed questionnaires had been received. This is 26% of the sample of 368 registered vessels.

Of the 368 questionnaires originally sent out:

- 94 were received completed

- 9 operators were out of business

- 2 operators have died

- 36 were undeliverable

Of the 94 completed questionnaires GG+A received, 73% or 67 respondents indicated that they would be willing to participate further in the study.

IN-PERSON INTERVIEWS

Follow-up interviews with a subsample of those indicating that they were willing to participate further in the study were conducted from February 16 - 28. The purpose of these interviews was to gather operating and capital cost data which were only obtainable through in-person interviews.

The sample frame for these follow-up interviews was drawn by careful analysis of the original universe, all those completing the mail-out questionnaire and those indicating they would be willing to participate further by location of mooring, maximum passenger capacity of their vessels, and types of trips taken. Table A-1 shows the final distribution of the sample. The distribution of actual completed interviews by area can be found in Table A-2. There were 13 complete interviews and all but one were from the original sample.

TABLE A-1

Sample Frame

<u>Moorings</u>	<u>Maximum Passengers</u>						<u>Total Originals</u>
	<u>0-10</u>	<u>11-20</u>	<u>21-30</u>	<u>31-45</u>	<u>46-55</u>	<u>56-99</u>	<u>100+</u>
San Diego/Oceanside							
Original	1			1		1	1
Alternate	1			1		1	1
San Clemente, San Pedro, Long Beach, etc.							
Original			1		1		2
Alternate			1		1		2
Redondo/Huntington, Santa Monica, Malibu, Marina del Rey, etc.							
Original						1	1
Alternate						1	1
Santa Barbara Area							
Original			1				1
Alternate			1				1
Santa Cruz Area							
Original					1	1	2
Alternate					1	None	1
Half Moon Bay							
Original				1			1
Alternate				1			1
San Francisco Bay Area							
Original	1	1	1	1			4
Alternate	1	1	1	1			4
Bodega Bay							
Original				1			1
Alternate				1			1
Ft. Bragg, Eureka and North							
Original	1						1
Alternate	None						
Total Originals	3	1	3	4	2	3	1

Source: Gruen Gruen + Associates

TABLE A-2

Distribution of Follow-up Interviews

<u>Location</u>	<u>Number</u>
Berkeley	1
Crescent City	1
Redondo Beach	1
San Diego	5
San Pedro	2
Santa Barbara	1
Santa Cruz	2
Total	13

Source: Gruen Gruen + Associates

APPENDIX B
QUESTIONNAIRES

October 25, 1978

Dear

The National Marine Fisheries Service (NMFS) has asked our firm, Gruen Gruen + Associates, to study the contribution of the commercial passenger fishing vessel industry. The NMFS is frequently asked to consider the benefits to society from fish caught by commercial passenger fishing vessel recreationists in their decisions of how to allocate ocean resources. We are taking a census of all California commercial passenger fishing vessel operations as a first step in obtaining a better description of your industry. All answers will be kept confidential and anonymity of responses is guaranteed.

We would very much appreciate the owners of more than one vessel filling out a separate questionnaire for each. We have utilized the information contained on the list of commercial passenger fishing vessel licenses to indicate the appropriate number of forms for enclosure. A stamped, self-addressed envelope has been enclosed for your convenience. If you have any questions concerning the completion of these questionnaire forms, please call Leslie Howell or myself collect at (415) 433-7598.

Sincerely,

Claude Gruen
Principal Economist

CG:smc
Enc.

COMMERCIAL PASSENGER FISHING VESSEL QUESTIONNAIRE

(INSTRUCTIONS: Many questions only require a (✓) mark for those responses that apply to you. Some ask you to insert a dollar or numerical response. Several ask you to record your answers by type of trip. Please disregard or leave blank all trip types which are not applicable to your operation.)

1. Are you a vessel owner/skipper____₁, an owner____₂ or a skipper____₃? —5
2. Do you also have a commercial license? Yes____₁ No____₂ —6
3. What is the gross registered tonnage and length of this vessel?
Gross tons_____ Length_____ —7,8
—9,10
4. What lengths of trips do you take? Half-day____₁, 3/4-day____₂,
full-day____₃, overnight/multi-day____₄, long-range____₅, or
charter____₆? —11
5. What is your Coast Guard certification for how far you can
range from shore? Is your vessel certified for a coastwise
route____₁, oceans route____₂, and/or a lakes, bays and sound
route____₃? —12
6. Please indicate where your vessel is moored. —13,14
7. What is the maximum number of passengers permitted on this
vessel? # of passengers_____ —15,16
8. On the average, what is the approximate number of passengers
carried during the primary fishing season? In the off season?
(Please indicate if your responses to this question are for
the season or per-trip.)
Average number during primary fishing season _____ —17,
Average number during the off season _____ —20,
9. How much fuel does your vessel burn per mile? _____ —23,24

How much fuel does your vessel burn by type of fishing trip?

Type of Trip	Number of Gallons Consumed per Trip	
half-day	_____	25,26
3/4-day	_____	27,28
full-day	_____	29,30,31
overnight/multi-day	_____	32,33,34
long-range	_____	35,36,37
charters	_____	38,39,40

In 1977, approximately how many fishing trips did you operate?

of fishing trips _____ 41,42,43

In 1977, approximately how many fishing passengers did you book?

of fishing passengers _____ 44,45

In 1977, approximately how many nonfishing trips did you operate (e.g., sightseeing, whale spotting)?

of nonfishing trips _____ 46,47,48

In 1977, approximately how many nonfishing passengers did you book?

of nonfishing passengers _____ 49,50

If you have a commercial fishing license, in 1977, approximately how many commercial fishing trips did you make?

of commercial fishing trips _____ 51,52

For your vessel, how many trips are necessary for you to break even? In this estimate, how many passengers per trip did you use in this estimate?

number of trips to break even _____ 53,54,55

average number of passengers per trip _____ 56,57

17. What is the price or range in ticket prices for each type of fishing trip?

Type of Fishing Trip	Price or Range in Ticket Price
half-day	_____
3/4-day	_____
full-day	_____
overnight/multi-trip	_____
long-range	_____
charters	_____

58,59

60,61

62,63

64,65

66,67

68,69

70,71

18. What were your gross revenues for this vessel in 1977?

\$ _____ gross revenues

Code #

2

1

2

3

4

19. Excluding the skipper, what is your average crew (number of deckhands including galley operators) by type of fishing trip and season?

Type of Fishing Trip	Primary Fishing Season	Off Season
	(Number of Crew Excluding Skipper)	(Number of Crew Excluding Skipper)
half-day	_____	_____
3/4-day	_____	_____
full-day	_____	_____
overnight/multi-day	_____	_____
long-range	_____	_____
charters	_____	_____

5

6

7

8

9,10

11,12

13,14

15,16

17,18

19,20

20. What is the present age of this vessel?

_____ age of vessel

21,22

23,24

25,26

21. How much did this vessel cost and what was the date of purchase?

\$ cost _____ date of purchase _____

27,28

30,31

22. What is this vessel's present market value?

present market value \$ _____

32,33

Do you plan any significant changes in your operation within the next five years (for example, to book more fishing and less sightseeing trips, or the reverse, more sightseeing and less fishing trips)? Yes , No , Why?

Do you expect to make a major capital investment in this vessel or to purchase a new vessel in the next five years? Yes No
(Please describe the nature of this investment below.)

THANK YOU VERY MUCH FOR YOUR COOPERATION. IF YOU WOULD BE WILLING TO BE INTERVIEWED IN-PERSON TO PROVIDE MORE INFORMATION ABOUT YOUR FISHING BUSINESS OPERATION, PLEASE WRITE YOUR NAME, ADDRESS AND PHONE NUMBER IN THE SPACE PROVIDED BELOW. YOUR ASSISTANCE IS OF TREMENDOUS IMPORTANCE IN ESTABLISHING THE CONTRIBUTIONS OF YOUR INDUSTRY TO NMFS AND OTHER GOVERNMENTAL DECISIONMAKERS.

PASSENGER/CHARTERBOAT FOLLOW-UP INTERVIEW

According to the questionnaire you completed, you take the following types of trips. (INTERVIEWER: Circle all trip types as indicated in their mailed questionnaire.) Am I correct that these were the types of trips you took in 1978?

INTERVIEWER: Make any necessary corrections in Question 1, then fill out the table below.

half-day	long range
3/4 day	charter
full-day	commercial trips
overnight/multi-day	

1. What months of the year do you operate?

January
February
March
April
May
June
July
August
September
October
November
December

2. What species do you catch?
(INTERVIEWER: Insert species below
and then ✓ for appropriate trip lengths)

3. How many days did you operate
(insert trip types) in 1978?

[illegible]

12. b. If yes, what proportion of your total fishing days fall under what fare structure?

(INTERVIEWER: Insert fare structure description below and then indicate % under appropriate trip column.)

13. What food and beverage items, if any, are included as part of the fare package?

(INTERVIEWER: Insert food and beverage items below and then ✓ for appropriate trip lengths.)

1/2 Day	3/4 Day	Full Day	Over- night	Long Range	Charter	Commer- cial Trips

14. If you took charter trips in 1978, how long did your typical charter last?

15. Did you take passengers on nonfishing/sightseeing trips?

Yes _____ No _____

If yes: How long were your typical sightseeing trips?

Did you take commercial nonpassenger fishery trips in 1978?

Yes _____ No _____

If yes: How many days did you fish? _____

What species did you catch? _____

Do you rent fishing gear? Yes _____ No _____

If yes: How much revenue did you earn in 1978 from such
rentals? \$ _____

Do you sell fishing gear? Yes _____ No _____

If yes: How much revenue did you earn in 1978 from such sales?

\$ _____

Do you sell refreshments and miscellaneous items on board?

Yes _____ No _____

If yes: How much revenue did you earn in 1978 from such sales?

\$ _____

Do you sell bait? Yes _____ No _____

If yes: How much revenue did you earn in 1978 from such sales?

\$ _____

What was your fuel bill in 1978? _____

Do you hire skippers to man your vessel? Yes _____ No _____

What were your crew (and skipper) costs in 1978?

\$ _____

What were your bait costs in 1978? \$ _____

What were your galley costs in 1978? \$ _____

How much did you spend on hull and
liability insurance in 1978? \$ _____

27. How much did you spend on maintenance and repair on vessel, equipment, and gear in 1978? \$ _____
28. How much did you spend on property and sales taxes, licenses, moorage and office expenses in 1978? \$ _____
29. Is your vessel representative (typical) of the commercial passenger vessels in this area which fish (INTERVIEWER: Insert species indicated in Question 2.)

Dear Fishing Vessel Operator:

In early November you received a copy of the enclosed questionnaire and cover letter. We have received returns from many of you. However, since some of these returns were anonymous, we have no way of knowing which of you have already completed the questionnaire.

We would very much appreciate your checking the appropriate box on the reverse side and returning this self-addressed and stamped postcard to us at your earliest convenience.

We want to thank all of you for your cooperation in helping us study the contributions of your industry to the economy and recreational opportunities of California.

PLEASE TEAR OFF BOTTOM HALF AND RETURN TO US.

CHECK ONE () ONLY:

- A. *I have already sent in my completed questionnaire.* ☐
- B. *I plan to complete the enclosed questionnaire and return it to you in the next 10 days.* ☐
- C. *I do not intend to complete the questionnaire.* ☐

If you checked C above, would you please fill in the limited information identified below. In this way, the census of California fishery vessel operations will be completed.

1. *What is the maximum passenger capacity of your vessel(s)?*

of passengers _____

2. *Where is your vessel(s) moored?:* _____

APPENDIX C

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